UNIVERSITY OF AMSTERDAM

UvA-DARE (Digital Academic Repository)

“Python is for girls!”: Masculinity, Femininity, and Queering Inclusion at Hackathons

Brooke, Siân

DOI
10.1145/3706598.3713235

Publication date
2025

Document Version
Final published version

Published in
CHI '25

License
CC BY

Link to publication

Citation for published version (APA):
Brooke, S. (2025). “Python is for girls!”: Masculinity, Femininity, and Queering Inclusion at Hackathons. In *CHI '25: Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems : April 26-May 1, 2025, Yokohama, Japan* Article 1001 Association for Computing Machinery. https://doi.org/10.1145/3706598.3713235

General rights
It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations
If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: https://uba.uva.nl/en/contact, or a letter to: Library of the University of Amsterdam, Secretariat, P.O. Box 19185, 1000 GD Amsterdam, The Netherlands. You will be contacted as soon as possible.

UvA-DARE is a service provided by the library of the University of Amsterdam (https://dare.uva.nl)

Download date:05 Sept 2026

"Python is for girls!": Masculinity, Femininity, and Queering Inclusion at Hackathons

Siân Brooke
Digital Interactions Lab
University of Amsterdam
Amsterdam, Netherlands
Data Science Institute
London School of Economics
London, United Kingdom
s.j.m.brooke@uva.nl

Abstract

This paper explores how queerness intersects with hackathon culture, reinforcing or challenging its masculine norms. By utilizing autoethnographic insights from seven UK hackathons, it reveals that while queerness is visibly celebrated, inclusion remains conditional—accepted only when it aligns with masculine-coded technical authority. Femininity, regardless of the queer identities of those who embody it, is devalued and associated with lesser technical competence. Beyond social dynamics, gendered hierarchies influence programming tools, roles, and physical environments, embedding exclusion within technical culture. Although gender-fluid expressions like cosplay provide moments of subversion, they remain limited by the masculine framework of hackathons. This study contributes to human-computer interaction and feminist technology studies by showing that queerness alone does not dismantle gendered hierarchies. It advocates for moving beyond visibility to actively challenge masculinized definitions of technical legitimacy, promoting alternative, non-exclusionary models of expertise.

CCS Concepts

• **Human-centered computing** → Collaborative and social computing; Empirical studies in collaborative and social computing.

Keywords

hackathons, queerness, gender, inclusion

ACM Reference Format:
Siân Brooke. 2025. "Python is for girls!": Masculinity, Femininity, and Queering Inclusion at Hackathons. In *CHI Conference on Human Factors in Computing Systems (CHI '25), April 26–May 01, 2025, Yokohama, Japan.* ACM, New York, NY, USA, 13 pages. https://doi.org/10.1145/3706598.3713235

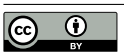
1 Introduction

> "As the crowds of young men swarm into the large stadium serving as the hackathon venue, it becomes clear that I do not fit in. Around me, the hackers embody an extended male adolescence. The young men are in a uniform of oversized dark hoodies and crumpled jeans, completed with mops of unruly hair –occasionally adorned with a fedora. I am jostled in the excitement by those in the ticketing queues around me. My cream coat and bag, white shirt, and dogtooth trousers contrasted with the dark attire the other hackathon attendees favored. As I reached the desk to register for the event, I was instructed to collect a branded t-shirt as my ticket. Only available in larger men's sizes, it completely drowned me. I swung my bag back onto my shoulders and began climbing the stairs into the belly of the hackathon."

Exploring technology development's material, sociotechnical, and personal aspects is vital in feminist technology studies [36, 41]. Hackathons play a significant role in Human-Computer Interaction (HCI) research, especially at conferences like CHI. These intensive 24–36-hour coding sessions provide a unique platform for participants to create technologies, promoting quick prototyping and hands-on exploration. By fostering interdisciplinary teamwork, hackathons unite varied perspectives from fields such as computer science, informatics, and psychology, aiding in the innovative design and assessment of user interfaces. As venues for investigating and integrating emerging technologies like virtual reality and artificial intelligence, studying hackathons is essential for keeping HCI research relevant and progressive in real-world contexts.

Extensive research indicates that hackathons disproportionately benefit specific demographics, especially young, white male tech enthusiasts [3, 5, 12, 16], otherwise referred to as "geeks." Consequently, these events often reflect gender dynamics that marginalize women and other underrepresented groups in computing. While "geek" can carry negative connotations, it is widely recognized in academic literature [20, 26] and used in this study for analytical clarity. My analysis of hackathons builds on this perspective, exploring how these coding contests resist efforts to foster greater inclusion and diversity.

Yet, as I participated in these events, I soon realized that the underrepresentation of women at hackathons was not the only issue regarding gender inclusivity. From my very first experience, I observed a meaningful and consistent presence of queer identities, expressed through rainbow pins, flags, and varied gender expressions in the attire and costumes of attendees. Queerness, in this context, can be understood as encompassing diverse sexualities and the playful subversion of traditional gender norms through



This work is licensed under a Creative Commons Attribution 4.0 International License.
CHI '25, Yokohama, Japan
© 2025 Copyright held by the owner/author(s).
ACM ISBN 979-8-4007-1394-1/2025/04
https://doi.org/10.1145/3706598.3713235

fluid and expressive presentations [24, 37]. The visibility of queerness was surprising and a refreshing change from the uniform "geek" masculinity I had anticipated. Although queer identities were distinctly visible at hackathons, they still represented a minority. Nonetheless, their presence raises an overlooked question in HCI scholarship: How do representations of queerness disrupt notions of masculinity at hackathons?

Utilizing autoethnographic data from my involvement in seven hackathons affiliated with UK universities in late 2019 and early 2020, this study examines the gendered and queer dynamics that emerged at hackathons before the restrictions of the COVID-19 pandemic halted research. Despite being based on observations from 2020, the findings remain pertinent to contemporary dialogues surrounding queering technical participation and tool development. This research expands on a broader ethnographic project focused on gender and interactions within hackathons (See; 4), employing a uniform dataset and methodology that includes participant observations, interviews, and field notes, complemented by ongoing reflections with hackathon organizers. Instead of focusing on recruitment strategies, I investigated the dynamics of participation and the cultural norms that operate during hackathons, where barriers to inclusion frequently arise [32]. The observations indicate that while recruitment defines who participates, meaningful engagement relies on supportive interactions during the event, influencing whether participants feel valued and are likely to return.

This study challenges the prevailing view in HCI literature that frames hackathons as sites of "geek" masculinity, where women are marginalized [16, 29]. While I examine how geek masculinity structures hackathon culture, my findings reveal that exclusion is not solely about gender binaries but about the devaluation of femininity itself. Though queerness is visible, it is accepted only when aligned with masculine-coded technical authority, reinforcing hegemonic norms rather than disrupting them. Beyond social interactions, this paper examines how gendered power structures extend to technologies themselves. Programming languages, tools, and artifacts reflect deep-seated binary associations, privileging masculinity in shaping technical expertise and innovation. By analyzing hackathons' social and material dimensions, this study reveals how gendered hierarchies are enacted interpersonally and embedded in computing infrastructures, sustaining exclusionary practices even in spaces that claim inclusivity.

2 Related Work

2.1 Masculinity at Hackathons

The exploration of masculinity within technology culture reveals the progression from the socially awkward yet intellectually esteemed "geek" to the hypermasculine and competitive "brogrammer," highlighting their influence on power dynamics and inclusion. While research in HCI and related fields frequently examines tensions between "geeks," women, and dominant forms of masculinity, queerness often remains underexplored [3, 32, 36]. Masculine hegemony, defined by ideals such as athleticism, competitiveness, and heterosexuality, marginalizes femininity and non-normative masculinities [26]. "Geeks", who emerged as a subject of study in the 1980s, embody a marginalized masculinity that contrasts with hegemonic norms through their technological expertise.

Unlike hegemonic masculinity, "geek" masculinity is characterized by a lack of social skills but gains esteem through intelligence and mastery of technology. As such, "geeks" can be framed as "queering" masculinities to some extent, as they are defined by attributes counter to the hegemonic norm [17]. "Geeks" are typically framed as heterosexual men whose technological knowledge replaces traditional masculine traits, positioning them as both outsiders and gatekeepers of technical expertise [11]. In her scoping review of masculinities in HCI, Seaborn [36] highlights that "geek" masculinity is inherently technology-focused, serving as a form of power when traditional masculine ideals are seen as unattainable. This paradoxical identity enables "geek" masculinity to assert dominance through technological expertise while excluding women, who are often viewed by "geeks" as unattainable objects of desire [20].

Despite incompetence and discomfort with dating being central to "geek" identity, heterosexuality remains as fundamental to "geeks" as a love of technology, with "geeks" often defined as simply being "bad with women." [20]. By centering heterosexuality, women are excluded from "geek" knowledges as unobtainable objects of sexual and romantic desire. Furthermore, queerness, and specifically the visibility of homosexuality, is also erased in this framing of the "geek" [11]. In her study of the online community BlueSky, Kendall [20] provides examples of how a gay participant engages with heterosexual humor and self-deprecation, including declaring that they are "bad with women" to fit into the group's "geek" masculine culture. In-person interactions offer opportunities for individuals to make hidden aspects of their identity visible, including sexuality. In Dunbar-Hester's [9] research into collaborative hackerspaces, vivid hair color was a resource employed by individuals with a non-binary gender identification as it "provided to interlocutors a relatively neutral aspect of [their] appearance on which to focus their reflexive comments about [their] presence." However, Dunbar-Hester [9] points to how even those who were reflective about their gender identification were vulnerable to stereotyping others based on presentations of gender.

As "geek" masculinity has received increased status due to its associations with wealth, the limitations of its position as a "queer" or disruptive masculinity have been exposed. In the last decade, entrepreneurial "geeks" have been recast with a competitive aggressiveness, exhibiting the hypermasculinity commonly associated with the culture of college fraternities and athletic societies [23, 41]. This trend includes both "geek" masculinity and the toxic, technology-oriented masculinity identified in Seaborn's [36] systematic literature review. This emerging stereotype has been labeled the "brogrammer." The term brogrammer began as a satirical term to refer to (men) programmers who embrace the behaviors of a "stereotypical frat-boy" who is fond of the term "bro" and with an ambition to become wealthy through their knowledge of technology as quickly as possible [31]. By amplifying the contradictions of "geek" masculinity—outsider and gatekeeper—hackathons create environments where traditional and emerging masculinities intersect, exposing tensions in how power and identity are negotiated in technology-focused spaces.

While existing research highlights how geek masculinity operates in contrast to hegemonic masculinity, these frameworks often neglect how queerness is integrated into, rather than disruptive

of, these dynamics. By examining hackathons as sites where traditional and emergent masculinities intersect, this study considers how queerness exists within these structures while femininity remains devalued.

2.2 Inclusion at Hackathons

While the presence of underrepresented groups at hackathons is often seen as progress, representation alone does not ensure meaningful inclusion. Instead, hackathons remain structured by gendered hierarchies that privilege masculinity, even as they incorporate queer identities. These events often mirror the gender and identity dynamics present in broader technology culture, including the dimensions of masculinity outlined in the previous section. Enhancing diversity in hackathons is a primary objective for HCI scholars, as these events play a crucial role in fostering innovation and developing skills [5]. However, simply increasing the presence of underrepresented groups—by gender, race, or other identities—is insufficient; meaningful inclusion is essential [5, 9]. This requires creating environments that appreciate diverse perspectives and actively address systemic barriers that limit participation. Recent research has emphasized inclusion across various identities, including gender [3, 16], disability/neurodiversity [1, 12], and citizenship [18]. Studies often focus on the experiences of underrepresented groups, such as women navigating predominantly male, white spaces [5] or (rarely) older participants collaborating with younger, more technical teams [42]. These studies underscore how individuals from diverse backgrounds engage in hackathon settings and how cultural variances shape collaboration and innovation, ultimately fostering more just and innovative outcomes.

However, while many initiatives aim to enhance inclusivity, they may inadvertently reinforce traditional gender binaries, often focusing on "female-focused" or exclusively women-centered events. These strategies can imply that mainstream hackathons are dominated by men, further alienating queer individuals who do not fit neatly into the categories of "man" or "woman." Prado et al. [32] argues that the "geek" masculinity associated with hackathons marginalizes queer participants, particularly trans individuals, limiting their opportunities for networking and career growth. Despite efforts to include women in male-centric environments, gender inclusion research often overlooks the nuanced experiences of queer participants. Even those who do not embody hegemonic masculinity may still feel alienated by the overwhelmingly "male" presence at many hackathons, reinforcing the binary views of gender and complicating efforts to include non-binary and gender-nonconforming individuals.

Further complicating these dynamics is the implicit gendering of the technologies and artifacts present at hackathons, such as programming languages, coding platforms, and hardware. These objects often carry associations with masculinity [7], reinforcing stereotypes that link femininity to inferiority or lesser competence in technical fields. Research has shown that environments filled with objects typically associated with "geek" masculinity, such as Star Trek posters, can deter women from engaging in these spaces [7]. Similarly, the design and styling of computer terminal interfaces are often aligned with "geek" masculinity, creating an unwelcoming environment that discourages women from using these technologies [27]. Queerness disrupts these assumptions by revealing how technologies—like identities—are subject to shifting cultural interpretations and are not inherently gendered. While many initiatives strive to improve diversity and inclusion across various identity groups, they often overlook the role of gendered artifacts, which may inadvertently marginalize queer participants and reinforce traditional gender binaries.

2.3 Queer HCI

Queer HCI provides a framework for examining how gender and identity are constructed within technology culture. Research presented at CHI has defined queer HCI as encompassing three key areas: (1) queer researchers investigating a broad array of topics, (2) researchers studying queer individuals, and (3) scholars applying queer theory in their work [37]. In their literature review, Taylor et al. [38] emphasize the importance of language and its implications in this context. The term "queer," a reclaimed slur, refers to people who are not "cisgender," with cisgender meaning those who (1) identify with the gender they were assigned at birth and/or (2) are heterosexual [21]. In this study, "queer" is used to find an inclusive, broad term to represent a diverse range of experiences and identities outside of the heteronormative, heterosexual norm, such as gay men, lesbians, bisexual and pansexual individuals, transgender and gender non-conforming (TGNC) people. The choice of "queer" reflects its capacity to capture the broad spectrum of identities that resist rigid categorization, but it remains an imperfect terminology that not all identify with.

Queer theory's emphasis on fluidity and contradiction provides a robust framework for understanding how HCI can challenge normative assumptions about identity and design. At its core, queer theory scrutinizes the concept of fixed identities and norms, emphasizing the importance of acknowledging contradictions and tensions to grasp queer lives and experiences [22]. Light [24] emphasizes the importance and value of queer theory in developing approaches to design that embrace diversity and resist determination. Drawing on Butler's [4] concept of gender performativity, Light highlights how gender is not fixed but continuously constituted and remade through iterative performances and interactions. This viewpoint disputes the idea of fixed gender differences in technology usage, focusing instead on norms shaped by contexts or environments, which can render queer lives seemingly dissonant or contradictory. Queer theory, as Light defines it [37], encourages the challenging of norms and readings of identity to create spaces for multiple, diverse identities. She advocates for "designing obliquely," incorporating elements like forgetting and eluding, which contrasts with HCI's usual focus on efficiency and effectiveness. By embracing these contradictions and fluidities, Light's approach not only challenges the normative structures of design but also creates space for diverse gender expressions, illustrating how queer theory can disrupt conventional definitions of legitimacy and foster more inclusive, dynamic environments.

Queer HCI research has also focused on how platforms collect gender data and the identification categories they provide. Technology design frequently limits users to binary gender choices ("male" or "female") or requires those outside the binary to be explicitly othered by selecting the option of "other". How platforms see

Figure 1: The researcher attending a hackathon.

such gendered information has significant implications for computational processes that depend on these predefined categories. Scheuerman et al [35] . argue that traditional design systems often lack awareness of how designers' gender politics are reflected in the interfaces they create. When technical tools infer gender, it can further erase identities that do not conform to the idealized binary norms of male and female, perpetuating exclusion and misrepresentation [21]. Though this study does not explicitly examine how gender is coded into the technologies designed at hackathons, I acknowledge that the inclusion of queerness likely impacts elements of the tools developed [21, 32]. Therefore, as a site for making technology, hackathons offer a valuable opportunity to explore how queerness is contradictory: demonstrating inclusion beyond normative gender while simultaneously excluding femininity in collaborative design processes.

Existing research indicates that queerness could meaningfully disrupt the traditional masculine norms prevalent in hackathon environments. Numerous HCI studies reveal that in technology culture, "geek" masculinity has marginalized women and non-normative identities [32, 38]. Since hackathons reflect this culture, they perpetuate gender binaries and restrict inclusion for queer individuals [9]. Incorporating queer perspectives potentially calls into question these rigid norms and emphasizes that both technologies and identities are fluid and socially constructed [22]. Although initiatives aimed at enhancing gender diversity are essential, they frequently neglect queer identities, which exacerbates exclusion. Queerness provides a speculative but compelling framework for challenging these norms by queering the dominant structures of masculinity and overturning conventional hierarchies, leaving room for greater inclusion at hackathons.

3 Methodology

Short-term, intensive ethnography is a well-established method in HCI research, particularly effective in capturing in-depth understandings of communities within their specific contexts [6, 19, 28]. However, ethnography in HCI is almost exclusively framed as producing "objective ethnographies," attempting to impartially describe a world where the ethnographer is a distant observer [33]. However, as Rode [34] argues, masking the ethnographic voice with objectivity narrows our perspective on the data and reduces the possibility of expanding theory. As a researcher immersed in the academic exploration of gender and technology and in the personal experience of navigating these spaces, my approach to this study is deeply influenced by my subjectivities. A non-queer researcher may not connect with or engage in the prominent queerness evident at hackathons, nor may they find it comforting. Therefore, I adopted a reflexive [34], situated [30], autoethnographic approach, which allowed me to engage with the nuanced dynamics of inclusion and exclusion, leveraging subjectivity to uncover deeper insights. Figure 1 depicts my participation in a hackathon.

3.1 Observing Hackathons

The main observation period for this research occurred from October 2019 to February 2020. Conversations regarding the findings with hackathon participants persisted until January 2021. This study covers seven dynamic events throughout the United Kingdom, presenting a rich multi-sited autoethnography of hackathons linked to the "League." The League has established itself as a respected international hackathon association. The organization oversees over 200 weekend-long competitions annually, engaging more than 75,000 students across North America and Europe. These events

Figure 2: Hackathon event space at a university in Northern England.

are focal points for technology enthusiasts, primarily organized by student-led societies and volunteers. By providing travel grants, free meals, training opportunities, and a strong emphasis on inclusivity, League-affiliated hackathons often feature a wider range of socioeconomic backgrounds than independent events, which may struggle with funding and promotion challenges.

Combining various field sites and observation sources was essential to uncovering the common themes and cultural touchstones that persist across hackathons, even with different locations and organizers. I began by contacting hackathons featured on the League's events page. Out of the twelve organizers I contacted, I attended seven hackathons throughout the United Kingdom to ensure geographic diversity. Annabel, a leading hackathon organizer in Southeast England, played a key role as a gatekeeper, referring me to other event organizers. Although I didn't conduct formal interviews, I engaged in unstructured conversations about strategies for ensuring gender diversity and how they perceive "success" regarding inclusion. At each hackathon, I introduced myself to attendees as a researcher focused on gender and technology. My technical skills, including coding, allowed me to contribute to my teams, reassuring the organizers that my involvement would enhance, not take away from, others' experiences.

I developed a structured observation schedule for the hackathon, centered on narrative themes like "pre-event," "first impressions," and "team formation." Yet, it functioned more as a framework for note-taking and reflection rather than a strict guideline, enabling me to shift my attention as new themes surfaced during the events. The adaptability of the autoethnographic methods permitted me to explore how attendees challenge the notion of "male-only" hackathons.

My active involvement in the hackathon competitions initially presented logistical hurdles, especially when transitioning between my favorite programming tool (VSCode) and note-taking applications. To simplify this process, I noted my insights directly in the scripts and markdown files related to my team efforts. These files were kept secure and stored locally without being shared with other participants.

My flexible approach to recording observations was essential for my involvement in the hackathon, capturing the rich social context and fostering a more comprehensive cultural understanding. Unlike passive observation, "deep hanging out" allows for more participatory engagement, where the desires and frustrations of attendees naturally emerge [13, 33]. For instance, the gendered dynamics surrounding toilet facilities at hackathons emerged as a significant topic for exploring queerness and gender inclusion. Although this matter may not arise during formal post-event interviews, it was vital to grasp the nuanced ways in which inclusion is experienced and challenged. These experiences reveal resistance to change, ongoing conflicts, and societal obstacles that impede hackathons' inclusivity and diversity initiatives.

3.2 Ethics

Informed consent is vital in reflexive research, particularly within the ethnographic tradition [19, 33]. I emailed the event organizers, introducing myself, explaining the goals of my study, and requesting their permission to conduct research at their events. As part of the informed consent process, I clearly outlined the nature of my research and how data would be collected and assured anonymity for participants. I framed the study as a project centered on gender inclusivity, highlighting its potential to suggest strategies for improving inclusivity at their events. I followed up my emails with video or phone calls with the organizers to discuss any concerns regarding my participation and any restrictions they wanted to impose on my activities.

Upon arriving at the events, the hackathon organizers often recognized me by name at registration. At one event, to my surprise, the organizer shouted excitedly to his colleagues that "the gender researcher" had arrived. They were welcoming and curious about my presence, frequently engaging me in discussions about my research and its ongoing findings. The same was true for most hackathon attendees.

At the hackathons, when conversations with attendees turned into more than just brief exchanges, I shared details about my research and my purpose for being there. Along with my verbal presentation, I provided small slips of paper summarizing my study's goals. I included my contact information, allowing participants to reach out with any questions or concerns afterward.

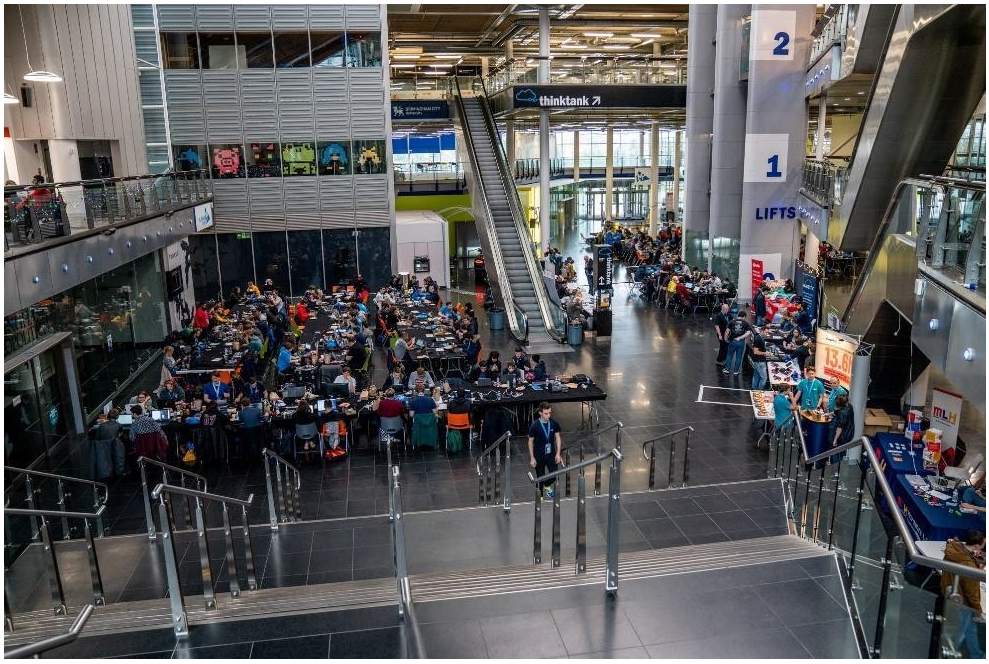


Figure 3: The main hackathon space is in an arena.

Attendees were also informed that all individual names in the account of the findings would be altered to ensure privacy. Descriptions of the events are anonymized, but they are specified in the United Kingdom region where they took place. I also incorporate photographs to support my analysis. When images may feature identifiable aspects of participants, I have blurred their faces to protect their anonymity, except for my own image. This project received institutional ethical approval from the Oxford Internet Institute, University of Oxford, in March 2019.

3.3 Analytical Procedures.

In ethnographic research, analysis and data collection are deeply interconnected. I followed an iterative and reflexive approach [34], employing thematic analysis [2], continuously analyzing, interpreting, and refining insights as I gathered empirical data. This process was guided by theoretical sampling, where I systematically compared and contrasted observations across different hackathon events to identify emerging patterns [8, 14].

I used analytical memos to record, sort, and code raw observations to organize and make sense of the data, which helped identify emerging themes across events [10]. In ethnography, it is essential to go beyond field notes, incorporating documents, artifacts, and environmental contexts that shape the observed culture [13]. This approach provided a more holistic understanding of hackathon spaces and how queerness and technical knowledge were represented within them.

To ensure rigor and validity, I engaged in respondent validation [25]. This involved discussing preliminary conclusions with hackathon participants to refine interpretations and provide my analysis aligned with their lived experiences. Given hackathons' temporary, fast-paced nature, I relied on informal conversations rather than structured interviews, aligning with rapid ethnographic assessment techniques [40]. I prioritized embedded, real-time participant engagement over post-event recollection.

I concluded my fieldwork once theoretical saturation was reached, meaning no new significant themes emerged [2], and COVID-19 restrictions halted further in-person observation. Afterward, I reanalyzed my field notes, structuring them according to my observation schedule and analytical memos to develop a cohesive understanding of how hackathon communities function. In each section of the following findings, I include excerpts from my field notes to demonstrate how my personal experiences shaped the development of these conclusions, which align with reflexive ethnographic practices [10, 34].

4 Findings

Each time I arrived at a hackathon venue, I felt a distinct combination of nervousness and excitement, amplified by the palpable energy in the air. The anticipation grew as participants rushed toward the event venue; their eagerness was contagious. When I crossed the threshold into the hackathon, I was immediately struck by sensory overload: a wall of noise greeted me—a cavernous space filled with animated chatter, the sharp beeping of electronics, and the mechanical hum of robotic gadgets. Figure 3 captures the arena-like setting of these hackathons, showcasing the blend of competition and collaboration that defined them.

My initial plan for these events was to focus solely on observing interactions. However, I quickly realized that hackathons are multisensory experiences, and understanding them required attention to more than just the visuals. Sound was an ever-present force: the excited voices, the rhythmic clicking of keyboards, and even video game soundtracks blasting through speakers created a cacophony

that was, at first, overwhelming. I was concerned that this sensory chaos would obscure the subtleties of interpersonal dynamics. Yet, as the events wore on, the collective mood would shift. The room could become eerily quiet, punctuated only by the occasional keyboard tap, as participants immersed themselves in moments of intense focus.

Beyond sound, the smells of hackathons formed an equally distinct and often jarring part of my research experience. The air would become heavy in the early evening with the aromas of fried foods, greasy pepperoni pizza, and garlic-laden meat dishes from food trucks or stands. The attendees of the events, known as *hackers*, were eager to save time, so they often ate at their workstations, surrounded by stacks of polystyrene containers and pizza boxes. By midnight, these smells mingled with the unmistakable odor of bodies, signaling participants' commitment to their projects at the expense of personal comfort. To me, this sensory combination felt distinctly off-putting and unwelcoming, reinforcing the perception that these spaces were dominated by "geek" masculinity—an identity often associated with a disregard for conventional social norms, including hygiene and shared comfort. After my first event, I carried a small roll-on bottle of lavender oil, a personal tool to counteract the environment's dominating smells. These sensory elements—the noise, the smells, and even the physical layout of hackathon spaces—created a continuity across events that shaped my perception of them as culturally distinct environments.

4.1 Masculinity at Hackathons

> "As we settled into the development phase, the roar of voices softened to a low hum. Teams gathered at long tables, surrounded by junk food, as they focused on the competition. A clear divide became apparent in the hall. On one side, the hackers embodied the "geek" masculinity I had expected, hunched over screens in casual attire. On the other side, glossy corporate representatives stood at their booths, dressed sharply in tailored shirts, their polished presentation starkly contrasting the relaxed, informal atmosphere among the hackers. The physical distance between the groups reflected the deeper divide between their worlds. A gulf that the hackathon attempted to bridge."
>
> The main hall in the first few hours of a hackathon in the West Midlands

At hackathons, the contrast between "geeky" hackers and corporate representatives highlighted distinct forms of masculinity. While "geek" masculinity was expected, the competitive nature of the event and the presence of financial firms introduced hegemonic masculinity. Representatives from companies like BlackRock and Capital One, all young men, embodied a polished, confident persona starkly different from the typically introverted, unkempt hackers.

The observed absence of the "brogrammer" stereotype in UK hackathons may reflect cultural differences in hegemonic masculinity. While American tech culture often promotes hypermasculinity, UK corporate developers projected a more restrained professionalism. However, within the hackathon, their authority diminished as hackers, embodying a socially awkward but technically dominant masculinity, mocked their appearance and perceived lack of technical prowess. This divide was evident in interactions between hackers and corporate reps. Representatives, aware of their outsider status, attempted to integrate by making technical jokes or asking questions but were often met with awkward silences or mockery. In one instance, a representative punctuated his points by punching his palm, prompting hackers to label him "alpha" sarcastically. This ironic reference to traditional masculinity reinforced hackers' status as the dominant figures in coding culture.

These interactions underscored the multifaceted performance of masculinity at hackathons. While corporate representatives embodied a polished ideal, hackers—often queerer and less image-conscious—subverted this by embracing their introverted "geek" qualities. The absence and active mockery of the "brogrammer" ideal highlighted how hackathons construct and negotiate power dynamics through masculinity.

4.1.1 "Be a man and integrate".

> "The visible sparks of light drew me to a hardware table, where a group of young men was bent over the circuitry, soldering irons in hand, surrounded by an array of lights and switches. Small plumes of smoke curled into the air, carrying a faint, metallic smell that wasn't unpleasant. I was curious about what they were building, but hesitant to interrupt their focused concentration, waiting for a moment to approach and engage in conversation without breaking their flow."
>
> The Hardware Lab at a Hackathon in the Southeast of the UK

The sensory overload at hackathons was hard to ignore. Large, open halls with high ceilings created an impersonal environment, while the sounds, smells, and flashes from soldering circuits drew my attention to the hardware tables. Unlike polished user-facing technologies, the raw circuitry felt tangible, and the scent of soldering, unexpectedly reminiscent of pine, added to the immersive experience.

Hardware projects were almost exclusively male-dominated, reinforcing traditional "geek" masculinity. My attempts to join these teams were met with discomfort, strained laughter, or outright dismissal. A gendered divide emerged: men gravitated toward hardware, associating it with gritty, competitive masculinity, while women and mixed-gender teams were more likely to focus on software. As one attendee said, "Hardware is where the real work happens—coding is easy compared to this."

Retro-inspired hardware projects dominated competitions, reinforcing technical hierarchies. One notable example, a Bomb Disposal game (Figure 4), reflected nostalgia for a technological past the developers never personally experienced. As one team member said, "We weren't around for it, but the nostalgia for that era is real. It's the golden age of [gaming] for us." Another added, "I spent hours watching YouTube walk-throughs of early video games, going through the history of gaming I never directly experienced."

Women and queer individuals were notably absent from hardware teams, often met with blatant exclusion. One participant dismissed my inquiry about a wearable project with, "I don't have time for you," accompanied by a dismissive hand wave. Masculinity

Figure 4: Presentation of a bomb disposal game created at a hackathon in the West Midlands.

remained central to hardware expertise, reinforced by playful social dynamics. During a discussion on computer setups, one team member shouted, "Be a man and integrate!"—mocking those who failed to meet technical standards while reinforcing male-coded expertise. Another noted, "If you don't integrate, you're not even really in the game."

These interactions revealed that the focus on hardware was not just technical innovation but reinforcing masculine identity. Even as hackathons embraced queerness in some ways, they maintained rigid gendered hierarchies. As one queer attendee commented, "It's all about fitting into that old-school, 'geek'-boy mold—if you don't, you're just invisible." This nostalgia for retro technology disrupted hackathons' supposed ethos of innovation, reinforcing gendered divisions rather than dismantling them.

4.1.2 *"Python is for girls".*

> *"At the team-building session, we all stood in a circle, listing our technical skills and the kind of projects we wanted to work on. Interestingly, people picked for teams didn't always have the most practical or relevant skills for the hackathon. Suppose someone knew a low-level but not particularly useful language or had some obscure technical knowledge that seemed to be highly valued. It felt like the more niche your expertise, the more desirable you became."*
>
> A side room was designated for participants of the Hackathon in Northern England to form teams.

Conversations about programming languages and technical tools often revealed the gatekeeping dynamics embedded within the hacking community. Specific languages carried gendered expectations, with some perceived as more technically competent than others. One attendee remarked, "Python is for noobs," implying that its higher-level, human-readable syntax made it less sophisticated. This view was reinforced in the hackathon's communication channel, where someone joked, "Python is for girls anyway; everyone knows that PERL is the language of REAL men." Though framed as humor, such comments underscored how gendered language reinforced divisions between what was considered technically competent and what was dismissed as "feminine."

These gendered perspectives played out in the event's competitive dynamics, often turning discussions into contests where participants asserted superiority through obscure technical knowledge. A team member offered unsolicited advice: "You know you can connect Fortran and Python?" Another responded, "Yes! Did you know Fortran still requires room for punch card spacing?" The exchange continued, escalating into displays of increasingly arcane technical knowledge. Another attendee interjected, "You should really try coding in Assembly. It's the only real language." A hacker in my team summed up this culture succinctly: "It's not about winning; it's about proving you know more than everyone else."

In this environment, status was tied to showcasing niche technical expertise rather than practical problem-solving. Languages like C, often associated with lower-level programming and proximity to machine code, were viewed as more masculine and technically rigorous. As one attendee noted, "C is the language of men. It's the hardest, most technical thing you can do. Python is for kids." This idea of technical masculinity reinforced a hierarchy where familiarity with "hardcore" languages like C signaled legitimacy. In contrast, higher-level languages like Python were often considered more feminine or juvenile. One hacker remarked, "If you're using Python, you're just taking the easy route. C is where the real work happens."

This persistent gendering of technical knowledge contributed to a broader gatekeeping culture, where expertise was judged by fluency in obscure or low-level languages rather than problem-solving ability. Ultimately, this framing reinforced an environment where

technical competence was assessed through competitive displays of niche knowledge rather than through practical contributions.

4.2 Inclusion at Hackathons

> *"Conversations with my team started feeling like competitions, where every comment had to be one-upped with even more obscure technical knowledge. It seemed there was a delight in pointing out even the smallest mistake, no matter how minor, turning the discussions into constant opportunities for correction. Rather than collaborative, the interactions became exhausting, with no room for error or misspeaking—every word was scrutinized, and any slip was met with condescension, assuming complete ignorance on my part."*
>
> Notes were taken around 2:00 am during a Hackathon in the East Midlands.

As I attended more hackathons, they became physically and mentally exhausting. At one event, my team reached the final round, which required presenting on the main stage. Afterward, as I returned to the audience, a woman attendee congratulated me but added, "It must be nice just to sit back and let the guys handle the technical stuff." Though frustrating, comments like this highlighted the persistent gendered assumptions at hackathons. While I could participate and observe the event, I also saw how women sometimes reinforced these biases, associating technical expertise with masculinity or deferring to men for key tasks.

Proving my technical abilities to skeptical teammates was a constant challenge. This was a common topic in discussions with women, many of whom felt femininity lowered their perceived competence. Chelsea, a lesbian attendee, acknowledged that while dressing down reduced scrutiny, it often came at the cost of recognition for more feminine-presenting women. My conversations with Annabel, a hackathon organizer, further clarified this dynamic. She shared, "Eventually, you get some acknowledgment, but it's always, 'Wow, you really wrote this? . . . Hey, you're pretty good for a girl."' Women's technical expertise was constantly questioned. Non-team members often assumed women had not contributed to the coding, reinforcing the persistent expectation that technical work was male-dominated.

Another woman with expertise in Artificial Intelligence described similar experiences. She explained that people assumed she relied on graphical user interfaces (GUIs) rather than writing code. "Interacting with an interface was seen as more acceptable for women," she told me, adding, "They didn't want to know that I wrote the code." This reinforced the idea that hands-on programming belonged to men, while women were expected to engage in less technical roles.

Queer attendees also replicated these biases. A queer man named Bernard, who had formed a team with his boyfriend, was overheard joking about a female participant's contribution. After their presentation, Bernard remarked, "Oh, you did all the talking, but we all know you didn't do the real stuff," referring to the technical aspects of the project. While some laughed, the dismissiveness of his comment lingered. Hours later, another team member reflected, "It was frustrating. She led the coding part of the project, but it was like no one saw that because she's a woman. It's not just us doing this."

Similarly, another queer woman, Nina, recounted how her own queer peers downplayed her technical contributions. "One of the other queer women on the team kept saying, 'Oh, don't worry, let them handle the hard coding stuff.' I know she didn't mean it to be malicious, but it was so frustrating. It felt like they didn't believe I could do it. But I've been coding longer than the guys!"

These incidents highlight how queerness does not inherently disrupt gendered biases about technical competence. Annabel reflected on this contradiction: "Even for us [queer individuals], who experience rejection or hate, we can still do this ourselves [. . .] often without realizing it. It's like there's this belief that women—whether queer or not—are somehow not as good with computers." Her comment underscored how ingrained sexism can persist, even in spaces that strive for inclusivity, revealing that technical credibility remains gendered—even among those who might otherwise challenge dominant norms.

4.2.1 *"Toilets for Everyone".*

> *"I quickly noticed the significance of bathrooms at the hackathon. The women's restroom, often relabeled as gender-neutral or for everyone, became a rare place of calm and cleanliness. It was one of the few spaces where women naturally crossed paths, providing a brief respite from the event's intensity. Casual conversations in the restroom became one of the more organic ways to meet and connect with other women, creating a meaningful point of interaction in an otherwise male-dominated environment."*
>
> Observations at my fourth Hackathon in the East Midlands

Restrooms may not typically be the focus of discussions on hackathon culture, yet they encapsulate broader gender norms, shaping experiences of inclusion, safety, and visibility. For queer individuals and those who defy traditional gender roles, these spaces carry particular meaning. Likewise, for women, gendered restrooms serve as a visible reminder of the gender disparity in attendance. The absence of queues in the women's restroom was striking. "It's kind of weird, isn't it?" one woman remarked. "Hackathons are one of the only places where we don't have to wait!" Such comments, often intended to be playful, underscored women's minority status at these events. It was common to overhear, "I thought I was the only one here!" or (ironically) "Is there a convention for women today?"—lighthearted but revealing acknowledgments of isolation.

Despite expectations of women's invisibility, markers of gender inclusivity were emerging. At two hackathons, the women's and accessible restrooms were stocked with free menstrual products—tampons and pads in branded toiletry bags beneath mirrors. When I asked about it, one organizer shrugged awkwardly, admitting he hadn't been involved but called it a "sensible" initiative. His casual phrasing suggested a pragmatic, rather than political, approach to inclusivity.

More striking were the handwritten signs affixed to restroom doors, reading "All-Gender Toilet!" or "For Everyone," often decorated with rainbow and pink and blue transgender pride stickers.

Figure 5: Laptop stickers collected at hackathons.

These temporary, hand-drawn symbols represented a deliberate effort to create safe, welcoming spaces. I overheard one participant gesture toward a sign and say, "They actually get it, don't they?"—a simple but meaningful acknowledgment of shifting hackathon culture.

While hackathons remain male-dominated, these gestures—offering menstrual products, creating inclusive restrooms—reflect a growing awareness of gender diversity. Organizers' efforts to accommodate participants' embodied realities challenge assumptions of hackathons as exclusively masculine spaces. Though far from fully inclusive, these small but significant acts signal a shift toward queering hackathon culture.

4.3 Queering Inclusion at Hackathons

> *"Seated in the darkened theatre, the stage was brightly lit with a projector that displayed the hackathon logo behind the lead organizer, who stepped up nervously. His bright rainbow hair fell across his face, and he flicked it back repeatedly as he spoke. Wearing a shirt adorned with pride flags, he attempted to appear relaxed, hands shoved in his pockets, but his discomfort was clear. He talked about the event's code of conduct, stressing that offensive language and homophobia wouldn't be tolerated, and violators would be kicked out. Despite his nervousness, his message was firm, reflecting a desire for inclusivity."*
>
> The Opening Ceremony of a hackathon in the West Midlands

Queer identities were visibly celebrated at hackathons through LGBTQA+ pride flags displayed on stickers, badges, and lanyards (Figure 5). Some designs were simple, while others subtly incorporated pride colors into cartoon illustrations or clothing accessories. Alongside rainbow flags, trans pride, non-binary, and asexual pride symbols were frequently seen. One organizer had dyed his hair in a full rainbow to match the pride flag, a striking contrast to the sleek, greyscale surroundings and the typically dark, muted clothing of attendees. Bright colors and pride markers stood out, reinforcing an inclusive atmosphere where participants felt free to express themselves and challenge traditional gender norms. This visibility fostered an environment where queerness and non-conforming gender expressions could thrive, adding to the sense of openness that permeated many of the hackathons.

At one event, I had lunch with Anthony, an organizer whose hoodie was covered in LGBTQA+ badges. Already familiar with him from prior discussions, I asked about the badges, and he explained that displaying his identity as a gay man was important to him. He wanted hackathons to be seen as inclusive spaces and joked, "I'm wearing so many badges that I practically make a noise when I walk." While committed to inclusion, Anthony expressed confusion about why ciswomen felt unwelcome when other gender minorities did not.

This conversation highlighted a key tension in the intersection of "geek" and queer cultures—while marginalized masculinities found common ground, the inclusion of women remained a challenge. Despite Anthony's visible support for queer inclusion, his perspective underscored the complexity of gender dynamics at hackathons.

4.3.1 Fairies, Spock, and Sexism.

> *"Several hours into the hackathon, my focus on building the interface began to wane. I lifted my eyes from the screen and let my gaze drift. The loud laughter caught my attention, and I looked to the right. There, I saw someone dressed in a way I hadn't expected: ripped pink fishnets over black tights, rainbow socks, scuffed white Doc Martens, a layered black skirt, and a rainbow corset topped with child's fairy wings and a cropped hoodie. They were the source of the laughter, radiating confidence and clearly at ease with their teammates."*
>
> Notes from my first hackathon, organized in the South East

Later in the event, I approached the individual from the vignette above, intrigued by their expressive outfit. They shared that hackathons provided a rare space to shed the pressure to "dress like a man" and conform to gender norms. Like comic conventions (or comicons), these events allowed them to explore trans and fluid identities without fear of rejection. Here, performative masculinity was not required—gender-fluid experimentation was encouraged, provided it retained a "geeky" undertone.

Many hackathon attendees pushed back against hegemonic masculinity, embracing fluid gender expressions in ways rarely observed in other tech spaces. Attending with friends often fostered a sense of support, creating an atmosphere where non-normative identities could thrive. However, while queerness was visibly celebrated, its acceptance was often contingent on aligning with "geek" masculinity rather than fundamentally challenging it.

Taylor, a regular attendee, embodied this dynamic. Often wearing vintage-inspired dresses with floral patterns paired with Dr. Martens and black curled hair, they used fashion to assert their gender fluidity while rejecting the idea that masculinity was necessary for technical legitimacy. "I feel like when I show up like this, I'm challenging the whole idea that you have to look like a stereotypical programmer to be one," they explained.

Skye, a non-binary participant, also played with gender presentation. At one hackathon, they wore an elaborate blue and white dress with gloves and stockings but noted that this feminine presentation led to assumptions of lower technical competence. By contrast, when attending in a Spock costume, complete with prosthetic pointed ears, they were treated with deference, as if the character's intelligence conferred technical credibility onto them. The stark difference in reception highlighted the intersection of queerness, gender presentation, and technical legitimacy in hackathon spaces.

These observations reinforced a key tension: while hackathons provided space for gender experimentation, they remained tethered to traditional associations between masculinity and technical skill. Skye's and Taylor's experiences demonstrate that even in environments that encourage self-expression, gender fluidity is often accepted only to the extent that it does not disrupt the prevailing masculine norms of "geek" culture. While queerness was visible and even celebrated, its inclusion remained conditional—still constrained by the structures it sought to challenge.

5 Discussion

Previous HCI and feminist technology studies have shown that hackathons privilege young, white male "geek" identities, reinforcing a masculinized hierarchy of technical skill [11, 20, 36]. My findings confirm this but move beyond a simple man/woman dichotomy by demonstrating that it is femininity—not just women—that is devalued in these spaces. While hackathons appear inclusive—celebrating queerness through visible markers such as pride stickers and gender-fluid attire—this inclusivity remains conditional. My analysis reveals that queerness is only fully accepted when it aligns with masculinity, reinforcing prior research in queer HCI [38]. Femininity, by contrast, is linked to lesser technical competence and remains a primary site of exclusion.

5.1 Hierarchy, Status, and Power

As highlighted at the beginning of this paper, prior research has shown that geek masculinity both rejects hegemonic masculinity and reinforces dominance through technical expertise [24, 36]. My findings extend such conclusions by demonstrating how hackathon culture performs and maintains this dominance. Participants assert technical authority by exhibiting skill and rejecting traditional corporate ideals, positioning intelligence and exclusivity over wealth and social dominance [20].

However, this alternative masculinity does not inherently "queer" gender norms [37]. While it may appear to reject much of the superficial appearances of American brogrammer culture, it maintains rigid gendered hierarchies, particularly by excluding femininity. Queer participants may be welcomed, but only when they adhere to masculine-coded technical authority.

5.2 Queerness Without Feminine Inclusion

An additional key contradiction of this work is that queerness is embraced, yet femininity remains marginalized. Although nonbinary and gender-fluid identities are visible, my findings indicate that feminine-coded behaviors continue to be read as technically incompetent—a pattern widely observed in computing cultures [9, 11].

Moreover, queer individuals do not inherently challenge sexism. Dunbar-Hester [9] finds that even queer participants may perpetuate gendered assumptions, reinforcing masculine-coded technical expertise rather than disrupting these power structures. This paradox suggests that hackathons do not simply exclude women but create a hierarchy where queerness is accepted only if its display and performances align with "geek" masculinity.

5.3 Gendering of Technologies

Beyond social hierarchies, technical artifacts themselves reinforce exclusion. Previous research has shown that programming languages, tools, and platforms are implicitly gendered [11, 22]. My findings confirm this, illustrating how the framing of programming languages, such as Python, reflects gendered status hierarchies—with certain languages viewed as "masculine" and more prestigious.

In line with Cheryan [7] et al., I show that the material conditions and spaces associated with computing shape experiences of inclusion. While gender-inclusive restrooms at hackathons signal diversity efforts, they often rely on repurposing accessible toilets,

creating barriers for disabled participants [6]. Similarly, sensory factors—such as bodily odors—shape who feels a sense of belonging [15, 30]. These findings highlight how gendered hierarchies are socially enacted and embedded in hackathon spaces, objects, and practices.

5.4 Implications

Rather than simply increasing gender diversity, my findings suggest that a more structural approach is necessary to challenge technical spaces' cultural and material conditions. To foster meaningful inclusivity, hackathons must address:

1. Diversity initiatives should focus on increasing numbers and challenging assumptions that tie masculinity to technical authority.
2. Programming languages, coding platforms, and skill hierarchies must be critically examined to prevent the reproduction of gender biases.
3. Inclusivity efforts should account for multiple forms of exclusion, particularly the marginalization of femininity, selective acceptance of queerness, and accessibility for disabled participants.

By tackling these deeper structures, HCI research can contribute to more transformative approaches to equity in technical environments.

5.5 Limitations

This study has examined the nuances of gender at hackathons, though its scope is limited to young people in the United Kingdom, a relatively privileged segment of global society. The analysis largely overlooks intersecting identities such as ethnicity and class, despite scholarship showing how hackathon venues can be dismissive or hostile to non-white participants, viewing them as security risks [39]. Additionally, my outward presentation as a ciswoman likely influenced how hackers discussed or downplayed their queerness. These limitations could be addressed by involving a more diverse research team with broader perspectives. Furthermore, the original focus on women's exclusion limited a more intentional investigation into queerness, potentially leaving gaps in understanding the full spectrum of experiences at hackathons.

6 Conclusion

This study demonstrates that queerness at hackathons does not inherently disrupt masculinity but is instead shaped by its dominance, often reinforcing rather than dismantling gendered hierarchies. While hackathons may signal inclusivity through visible queer representation, my research shows that such inclusion is conditional, reinforcing masculine-coded technical authority rather than challenging it.

By shifting the focus from women's exclusion to the marginalization of femininity, this research builds on Dunbar- Hester [9] and Light [24] by illustrating how queer participants themselves may reinforce dominant technical hierarchies rather than dismantle them. As opposed to disrupting the norms of geek masculinity, queerness in hackathon spaces is assimilated into existing hierarchies, where technical legitimacy remains tied to masculinity and femininity is devalued.

This study extends insights by showing that exclusion is not just enacted socially but also embedded in computing culture's tools, spaces, and practices. The gendering of programming languages, the exclusionary impact of physical environments, and the role of sensory factors (e.g., odors) in shaping belonging illustrate that gendered power is embedded in both culture and material design. These findings expand on Faulkner [11] and Keyes [22] by demonstrating that technical expertise is gendered in practice and through the design of computing infrastructures.

For queerness to truly challenge masculinity in hackathon culture, inclusion must go beyond visibility and address the deeper structural biases that equate technical competence with masculinity. Queer representation alone is insufficient if it continues to reinforce dominant hierarchies rather than subvert them. Disrupting masculinity in hackathons requires reimagining technical legitimacy that does not privilege competition, exclusivity, or masculine-coded expertise. Future research should explore alternative models of technical authority that challenge masculine norms, fostering hackathon cultures where technical skill is decoupled from gendered expectations.

As queer identities and women face increasing barriers to inclusion in contemporary society, it is essential that hackathons and informal technology spaces actively resist these exclusions and remain open to diverse identities. Beyond simply accommodating difference, these spaces must foster structural change that challenges gendered power dynamics in technical culture. Ultimately, creating more inclusive hackathon spaces demands not only increasing representation but actively dismantling the structures that privilege masculinity and marginalize femininity within technical culture.

Acknowledgments

I would like to thank Dr. Theodora Sutton for her invaluable guidance on performing and writing ethnographically, which has greatly shaped this paper's methodological and analytical approach. I am also deeply grateful to the reviewers for their insightful and constructive feedback, which has significantly strengthened this work. Their comments and suggestions have helped refine the arguments and improve the piece's clarity and contribution.

References

[1] Adam Patrick Bell, David Bonin, Helen Pethrick, Amanda Antwi-Nsiah, and Brent Matterson. 2020. Hacking, disability, and music education. *International Journal of Music Education* 38, 4 (November 2020), 657–672. https://doi.org/10.1177/0255761420930428

[2] Virginia Braun and Victoria Clarke. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3, 2 (January 2006), 77–101. https://doi.org/10.1191/1478088706qp063oa

[3] Siân Brooke. 2022. Nice Guys, Virgins, and Incels: Gender in Remixing and Sharing Memes at Hackathons. In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems* (*CHI '22*), April 29, 2022. Association for Computing Machinery, New York, NY, USA, 1–14. https://doi.org/10.1145/3491102.3517627

[4] Judith Butler. 2015. *Gender Trouble: Feminism and the Subversion of Identity* (First issued in hardback ed.). Routledge, Taylor & Francis Group, New York London.

[5] Connie W. Chau and Elizabeth M. Gerber. 2023. On Hackathons: A Multidisciplinary Literature Review. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*, April 19, 2023. ACM, Hamburg Germany, 1–21. https://doi.org/10.1145/3544548.3581234

[6] Connie W. Chau and Elizabeth M. Gerber. 2023. On Hackathons: A Multidisciplinary Literature Review. In *Proceedings of the 2023 CHI Conference on Human*

Factors in Computing Systems, April 19, 2023. ACM, Hamburg Germany, 1–21. https://doi.org/10.1145/3544548.3581234

[7] Sapna Cheryan, Victoria C. Plaut, Paul G. Davies, and Claude M. Steele. 2009. Ambient belonging: How stereotypical cues impact gender participation in computer science. *Journal of Personality and Social Psychology* 97, 6 (2009), 1045–1060. https://doi.org/10.1037/a0016239

[8] Juliet Corbin and Anselm Strauss. 2008. *Basics of Qualitative Research (3rd ed.): Techniques and Procedures for Developing Grounded Theory*. SAGE Publications, Inc., 2455 Teller Road, Thousand Oaks California 91320 United States. https://doi.org/10.4135/9781452230153

[9] Christina Dunbar-Hester. 2019. *Hacking Diversity: The Politics of Inclusion in Open Technology Cultures*. Princeton University Press, Oxford.

[10] Robert M. Emerson, Rachel I. Fretz, and Linda L. Shaw. 1995. *Writing Ethnographic Fieldnotes*. University of Chicago Press. https://doi.org/10.7208/chicago/9780226206851.001.0001

[11] Wendy Faulkner. 2000. The Power and the Pleasure? A Research Agenda for "Making Gender Stick" to Engineers. *Science, Technology, & Human Values* 25, 1 (January 2000), 87–119. https://doi.org/10.1177/016224390002500104

[12] Kiev Gama, George Valença, Candy Estelle Marques Laurendon, Ájò Nasidí Marques, Luís Eduardo Ramos, Ravena Amaral, Clarissa Maria Dubeux Lopes Barros, and Guilherme Xavier. 2023. Hackathons as Inclusive Spaces for Prototyping Software in Open Social Innovation with NGOs. In *2023 IEEE/ACM 45th International Conference on Software Engineering: Software Engineering in Society (ICSE-SEIS)*, May 2023. IEEE, Melbourne, Australia, 58–70. https://doi.org/10.1109/ICSE-SEIS58686.2023.00012

[13] Clifford Geertz. 1998. Deep Hanging Out. *The New York review of Books 45*, 69–72.

[14] Barney G. Glaser, Anselm L. Strauss, and Elizabeth Strutzel. 1968. The Discovery of Grounded Theory; Strategies for Qualitative Research: *Nursing Research* 17, 4 (July 1968), 364. https://doi.org/10.1097/00006199-196807000-00014

[15] Mark Graham. 2016. *Anthropological Explorations in Queer Theory* (1st ed.). Routledge, London. https://doi.org/10.4324/9781315567280

[16] Caroline D. Hardin. 2021. Gender Differences in Hackathons as a Non-traditional Educational Experience. *ACM Trans. Comput. Educ.* 21, 2 (June 2021), 1–30. https://doi.org/10.1145/3433168

[17] Robert Heasley. 2005. Queer Masculinities of Straight Men: A Typology. *Men and Masculinities* 7, 3 (January 2005), 310–320.

[18] Lilly Irani. 2015. Hackathons and the Making of Entrepreneurial Citizenship. *Science, Technology, & Human Values* 40, 5 (September 2015), 799–824. https://doi.org/10.1177/0162243915578486

[19] Tejaswini Joshi, Heidi Biggs, Jeffrey Bardzell, and Shaowen Bardzell. 2024. Who is "I"?: Subjectivity and Ethnography in HCI. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (*CHI '24*), May 11, 2024. Association for Computing Machinery, New York, NY, USA, 1–15. https://doi.org/10.1145/3613904.3642727

[20] Lori Kendall. 2002. *Hanging out in the virtual pub: Identity, masculinities, and relationships online*. University of California Press. https://doi.org/10.1525/california/9780520230361.001.0001

[21] Os Keyes. 2018. The Misgendering Machines: Trans/HCI Implications of Automatic Gender Recognition. *Proc. ACM Hum.-Comput. Interact.* 2, CSCW (November 2018), 1–22. https://doi.org/10.1145/3274357

[22] Os Keyes. 2023. Inconclusion. In *Queer Reflections on AI* (1st ed.). Routledge, London, 179–186. https://doi.org/10.4324/9781003357957-15

[23] Daniel Kreiss and Kirsten Adams. 2019. Navigating the brogrammers and the boys' club: Women's representation and experiences in political technology. *New Media & Society* 21, 9 (September 2019), 1967–1987. https://doi.org/10.1177/1461444819835573

[24] Ann Light. 2011. HCI as heterodoxy: Technologies of identity and the queering of interaction with computers. *Interact. Comput.* 23, 5 (September 2011), 430–438. https://doi.org/10.1016/j.intcom.2011.02.002

[25] Yvonna S. Lincoln, Egon G. Guba, and Joseph J. Pilotta. 1985. Naturalistic inquiry. *International Journal of Intercultural Relations* 9, 4 (January 1985), 438–439. https://doi.org/10.1016/0147-1767(85)90062-8

[26] Heather Mendick, Andreas Ottemo, Maria Berge, and Eva Silfver. 2023. Geek entrepreneurs: the social network, Iron Man and the reconfiguration of hegemonic masculinity. *Journal of Gender Studies* 32, 3 (April 2023), 283–295. https://doi.org/10.1080/09589236.2021.1981836

[27] Danaë Metaxa-Kakavouli, Kelly Wang, James A. Landay, and Jeff Hancock. 2018. Gender-Inclusive Design: Sense of Belonging and Bias in Web Interfaces. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (*CHI '18*), April 21, 2018. Association for Computing Machinery, New York, NY, USA, 1–6. https://doi.org/10.1145/3173574.3174188

[28] Frauke Mörike. 2019. Ethnographic methods for human factors researchers: Collecting and interweaving threads of HCI. In *Conference on Human Factors in Computing Systems - Proceedings*, May 02, 2019. Association for Computing Machinery. https://doi.org/10.1145/3290607.3298814

[29] Johanna Okerlund, David Wilson, and Celine Latulipe. 2021. A Feminist Utopian Perspective on the Practice and Promise of Making. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (*CHI '21*), May 07, 2021. Association for Computing Machinery, New York, NY, USA, 1–16. https://doi.org/10.1145/3411764.3445126

[30] Sarah Pink, Kerstin Leder Mackley, Val Mitchell, Marcus Hanratty, Carolina Escobar-Tello, Tracy Bhamra, and Roxana Morosanu. 2013. Applying the lens of sensory ethnography to sustainable HCI. *ACM Trans. Comput.-Hum. Interact.* 20, 4 (September 2013), 1–18. https://doi.org/10.1145/2494261

[31] Rose K. Pozos and Michelle Friend. 2021. "You Sound Like a Good Program Manager": An Analysis of Gender in Women's Computing Life Histories. In *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education*, March 03, 2021. ACM, Virtual Event USA, 692–698. https://doi.org/10.1145/3408877.3432433

[32] Rafa Prado, Wendy Mendes, Kiev S. Gama, and Gustavo Pinto. 2021. How Trans-Inclusive Are Hackathons? *IEEE Softw.* 38, 2 (March 2021), 26–31. https://doi.org/10.1109/MS.2020.3044205

[33] Amon Rapp. 2018. Autoethnography in Human-Computer Interaction: Theory and Practice. In *New Directions in Third Wave Human-Computer Interaction: Volume 2 - Methodologies*, Michael Filimowicz and Veronika Tzankova (eds.). Springer International Publishing, Cham, 25–42. https://doi.org/10.1007/978-3-319-73374-6_3

[34] Jennifer A. Rode. 2011. Reflexivity in digital anthropology. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, May 07, 2011. ACM, Vancouver BC Canada, 123–132. https://doi.org/10.1145/1978942.1978961

[35] Morgan Klaus Scheuerman, Aaron Jiang, Katta Spiel, and Jed R. Brubaker. 2021. Revisiting Gendered Web Forms: An Evaluation of Gender Inputs with (Non-)Binary People. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*, May 06, 2021. ACM, Yokohama Japan, 1–18. https://doi.org/10.1145/3411764.3445742

[36] Katie Seaborn. 2023. Interacting with Masculinities: A Scoping Review. In *Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems* (*CHI EA '23*), April 19, 2023. Association for Computing Machinery, New York, NY, USA, 1–12. https://doi.org/10.1145/3544549.3585770

[37] Katta Spiel, Os Keyes, Ashley Marie Walker, Michael A. DeVito, Jeremy Birnholtz, Emeline Brulé, Ann Light, Pınar Barlas, Jean Hardy, Alex Ahmed, Jennifer A. Rode, Jed R. Brubaker, and Gopinaath Kannabiran. 2019. Queer(ing) HCI: Moving Forward in Theory and Practice. In *Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems*, May 02, 2019. ACM, Glasgow Scotland Uk, 1–4. https://doi.org/10.1145/3290607.3311750

[38] Jordan Taylor, Ellen Simpson, Anh-Ton Tran, Jed R. Brubaker, Sarah E Fox, and Haiyi Zhu. 2024. Cruising Queer HCI on the DL: A Literature Review of LGBTQ+ People in HCI. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (*CHI '24*), May 11, 2024. Association for Computing Machinery, New York, NY, USA, 1–21. https://doi.org/10.1145/3613904.3642494

[39] Helen Thornham and Joanne Armitage. 2023. Judders, Jabs, and Slips: Automation, Anomalies, Movements. *Science, Technology, & Human Values* (July 2023), 01622439231183334. https://doi.org/10.1177/01622439231183334

[40] Cecilia Vindrola-Padros and Ginger A. Johnson. 2020. Rapid Techniques in Qualitative Research: A Critical Review of the Literature. *Qual Health Res* 30, 10 (August 2020), 1596–1604. https://doi.org/10.1177/1049732320921835

[41] Judy Wajcman. 2019. How Silicon Valley sets time. *New Media & Society* 21, 6 (June 2019), 1272–1289. https://doi.org/10.1177/1461444818820073

[42] Wiesław Kopeć, Bartłomiej Balcerzak, Radosław Nielek, Grzegorz Kowalik, Adam Wierzbicki, and Fabio Casati. 2018. Older adults and hackathons: a qualitative study. *Empir Software Eng* 23, 4 (August 2018), 1895–1930. https://doi.org/10.1007/s10664-017-9565-6