

TONY LEE

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Education

Virginia Tech

Ph.D. Cognitive Engineering

M.S. Human Factors Engineering & Ergonomics

B.S. Industrial & Systems Engineering (Minor: Human-Computer Interaction)

Blacksburg, VA

Aug 2026 – Dec 2029

Aug 2024 – May 2026

Aug 2019 – May 2024

Work Experience

Graduate Research Assistant (GRA)

01/2026 – 08/2026

Virginia Tech - The Bulls Run Group, LLC (BRG)

Blacksburg, VA

- Led 5 monthly formative and summative UX evaluation cycles for a collaborative Open Source Intelligence (OSINT) software tool, measurably improving usability prior to commercialization.
- Designed and executed mixed-methods studies of individual and team-based workflows, developing protocols, task scenarios, moderator guides, and survey instruments to standardize evaluation across cycles.
- Moderated usability sessions and analyzed session video alongside survey data, triangulating behavioral and self-reported measures to identify usability breakdowns.
- Translated findings into prioritized design recommendations, presenting to core leadership and the development team each cycle to drive iterative improvements.
- Authored a summative report synthesizing all 5 cycles, documenting usability progress and outstanding Jobs-To-Be-Done (JTBD) to inform product roadmap decisions.

AI Security Product Research Intern

01/2026 – 06/2026

TELUS Digital - Fuel iX Fortify

Charlottesville, VA

- Led 2 competitive landscape analyses benchmarking 11 AI security products across the AI red teaming and agentic AI markets, defining UX and capability differentiation opportunities.
- Facilitated 3 ideation workshops and synthesized 4 data sources via affinity mapping with deductive and inductive coding, identifying critical gaps in data visualization, actionability, and business-impact translation across 6 competitor products.
- Built an OWASP Agentic Top 10 (ASI) coverage matrix evaluating 5 vendors across 10 risk categories, surfacing 2 categories with zero market coverage and delivering 5 market findings and 4 positioning opportunities.
- Conducted a UI/UX audit of Fuel iX Fortify, translating findings into 6 prioritized design recommendations spanning onboarding, information architecture, prioritization, and remediation workflows; recommendations were applied to enhance the product.
- Presented findings to core leadership, product, and UX design teams, collaborating cross-functionally to align insights with JTBD roadmap and go-to-market priorities.

AI Product Research Intern

05/2025 – 08/2025

TELUS Digital - Fuel iX Copilots

Charlottesville, VA

- Led 3 qualitative usability and case studies for a B2B enterprise AI tool, quantifying efficiency in hours saved to translate productivity gains into projected organizational and monetary impact.
- Designed and executed mixed-methods studies comprising 10 in-depth interviews and 5 SME focus groups, generating 10 prioritized product improvements and defining 7 JTBD to anchor roadmap decisions.
- Facilitated a contextual inquiry workshop with 8 non-profit organizations, identifying 9 user pain points, 13 feature requirements, and 5 opportunities for AI-assisted task interventions.
- Authored 3 final reports and presented findings to core leadership, influencing product roadmap decisions, beta testing strategy, and future AI tool development.

Graduate Research Assistant (GRA)

08/2024 – 05/2025

Virginia Tech - Technology-enhanced Learning and Online Strategies (TLOS)

Blacksburg, VA

- Secured \$50,000 in XR-focused research funding through competitive grant applications, sustaining a multi-phase research program through Phase III.
- Led end-to-end development of an XR training application, driving the full design lifecycle from wireframes and prototyping through iterative usability testing.
- Designed and executed mixed-methods studies combining surveys, focus groups, and usability testing to identify user needs and pain points while measuring user performance and self-efficacy.

Skills & Tools

- **Research Methods:** Usability Testing (Remote & In-Person), Contextual Inquiry, Field & Diary Studies, Ethnographic Research, 1:1 Interviews, Focus Groups, Surveys, Unmoderated Studies, Heuristic Evaluations, A/B Testing, Competitive Analysis, Mixed-Methods Research.
- **Tools:** Gemini, Claude, Figma, R Studio, Qualtrics, QuestionPro, IBM SPSS, Tableau, Jira, Obsidian.
- **Domain & Process:** Human-Computer Interaction, Cognitive Engineering, Human Factors & Ergonomics, AR/VR, Eye-Tracking, Human Performance & Attentional Demands, Inferential Statistics, User-Centered Design, Iterative Design, Agile, Cross-Functional Collaboration, Stakeholder Reporting.