Cameron Beattie

cameronbeattie306@gmail.com — +1 (306) 260-2385 —
https://cameronbeattie306.github.io/cameronbeattie/ — Saskatoon, SK

Summary

Graduate Computer Science student specializing in HCI. Experienced in Python, C, Java, and JavaScript with Linux, multithreading, debugging, Git, and high-performance data pipelines. Strong technical communicator and team player, adept at mentoring and collaborating on complex software projects.

Education

Master of Science in Computer Science (HCI) *Sep 2025 – Spring 2026*
University of Saskatchewan

Bachelor of Science Honours in Computer Science *Sep 2021 – May 2025*
University of Saskatchewan
High Honours; NSERC USRA (2025); Dean's List (2022-2023)

Experience

Undergraduate Research Assistant (HCI Lab) *May–Aug 2023, 2024, 2025*

- Designed and implemented experimental systems in Python, Java, and JavaScript; focused on performance, reliability, and data collection.
- Built automated data pipelines and prototypes; applied algorithms for efficient data processing.
- Analyzed behavioral datasets; co-authored three papers emphasizing documentation and reproducibility.

Teaching Assistant – CMPT 381 & CMPT 145 *Sep–Dec 2025, Jan–Apr 2026*

- Delivered tutorials, debugged projects, and provided mentorship in programming and software design.
- Supported 60–160 students, reinforcing debugging and best practices.

Selected Projects

Understanding and Improving the Performance of Action Pointing: Link to Paper

- Investigated a new interaction technique for moded actions through exploratory prototypes.
- Designed and ran 3 user studies, analyzed data, and co-authored a published paper.

Investigating the Design and Performance of Letter Chords:

- Researched a novel typing technique using letter chords for command entry.
- Built study tools, analyzed user performance, and collaborated on a research paper.
- Presented research at Research Fest 2025 and SURE 2025; one paper under review and one in preparation.

BEAP Engine Web Application Link to Repository

- Modernized a data ingestion pipeline in Python and Docker for wearable sensor data; improved user experience and system maintainability.
- Applied software engineering best practices: automated testing, Git version control, and documentation.

Multiplayer Networking Architecture – Snake Game: Link to Repository

- Implemented and benchmarked client-server, host-based, and distributed networking models in JavaFX.
- Evaluated latency, reliability, and scalability under simulated network conditions.
- Applied multithreading to ensure smooth gameplay and responsiveness.

Skills

- Languages: Python, Java, C, JavaScript, Bash, R
- Frameworks & Tools: Git, Docker, Node.js, React, JUnit
- Data & Analysis: R (statistics, visualization), Pandas, NumPy
- Systems & Networking: Linux, HTTP, TCP/UDP, OS & security fundamentals
- Communication: Technical writing, presentations, interdisciplinary collaboration