TROY MCBRIDE

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EDUCATION

Carnegie Mellon University, Pittsburgh, PA   Graduating May 2028
Bachelor of Science in Electrical and Computer Engineering

WORK AND RESEARCH EXPERIENCE

Motorola Solutions – *Intern*   June 2023 – August 2023
Product Overview | Internship Report
- Collaborated remotely and in person; hands-on internship with professionals debugging the AI call-routing technology on Motorola's cutting-edge product, the Intercom Reader Pro, and redesigning physical intercom to improve security features
- Learned Python to quantify debugging data and extract data from intercom logs
- Contributed to project that was utilized at higher tiers of Motorola

Academic Research on Blockchain Analytics and Cryptocurrencies   June 2022 – Present
- Collaborated with a Stanford Computer Science PhD student to research cryptocurrency and blockchain technology to predict liquidation events by analyzing price movements in cryptocurrency marketplaces
- Wrote code and used data on changes in cryptocurrency prices to determine how many assets were liquidated while simultaneously evaluating core synergies
- Presented research project and paper to International Science Discussion Organization in February 2023

Computers 4 Kids – *Co-Founder*   July 2021 – Present
- Founded in 2021, Computers 4 Kids strives to end the digital divide by working with various local nonprofits to identify students from lower-income backgrounds who could most benefit from a refurbished personal computer
- Refurbished and supplied over 20 computers to date
- The organization collects, refurbishes, cleans, and donates these computers to students in local low-income communities
- Partnered with Minds Matter, nonprofit organization that serves low-income families in LA, to identify potential recipients

Boys and Girls Club – *Course Founder/Instructor*   September 2023 – December 2023
- Curated and taught hands-on personalized class activities/lessons to over 15 students about computer hardware/software topics over 8 weeks

PROJECTS

Spoilsafe - Photos   October 2024 – Present
- Smart sensor-enabled container that predicts and prevents food spoilage using specialized gas sensor and Arduino ESP32
- Web app created with React and NodeJS allows users to access gas readings and spoil predictions via Bluetooth
- Won the Innov18 Nucor Corporation Product Award

ReachUrTeacher - GitHub | Video Demo   February 2025
- Web app that tracks raised hands in real time using OpenCV to maintain student engagement in large lecture halls
- Features: question queue system, face recognition database, and seamless external camera switching
- Python backend, HTML/JavaScript frontend

Pocket League - GitHub   December 2024
- Python based video game utilizing 2D graphics based off the bestselling game Rocket League
- Features: multiplayer, custom physics engine, power-ups, training mode, and a robust UI/UX
- Used Python Imaging Library (PIL) and CMU Graphics

ADDITIONAL SKILLS & INTERESTS

- Integrated Circuit Design
- Python, Java, JavaScript, HTML, SQL, and React
- Computer hardware architecture (built and refurbished over 30 computers)