Sam Belliveau

+1 (646) 691-6208 | sam.belliveau@gmail.com | linkedin.com/in/sam-belliveau | github.com/Sam-Belliveau

EDUCATION

Cornell University   Ithaca, NY
Bachelor of Engineering in Electrical Computer Engineering   *Aug. 2022 – May 2026*

Stuyvesant High School   New York, NY
Regents Diploma with Advanced Designation with Honors   *Sept. 2018 – Jun. 2022*

TECHNICAL SKILLS

Languages: C / C++, Python, Java, Rust, Swift, Go, JavaScript, Verilog HDL, SQL, HTML, GLSL, Bash / ZSH
Technologies: Git, Linux, Docker, VS Code, Robot OS (ROS), Cassandra, BigQuery, Numpy, Scipy, PyTorch

EXPERIENCE

Undergraduate Researcher   June 2024 – Present
Abe Davis's Group @ Cornell University   *Ithaca, NY*
- Refactored ReCapture application to use modern SwiftUI frameworks & coding practices
- Built robust framework for storing image metadata in ReCapture to allow for easy retrieval

Robotics Software Engineer   November 2023 – Present
Cornell University Autonomous Underwater Vehicles   *Ithaca, NY*
- Implemented high performance Kalman Filtering using Nvidia's CUDA framework for submarine localization
- Implemented least squares optimization to determine thruster speeds for desired submarine movement

Signal Analysis Intern   January 2023 – May 2023
Feinstein Institute for Medical Research   *Manhasset, NY*
- Automated Sharp Wave Ripple (SWR) detection using Python and SciPy to analyze EEG data
- SWR's are used to predict the onset of seizures, and potentially play a pivotal role in memory formation

VEX Robotics Tutor / Coach   October 2022 – May 2023
PLAYIDEAs NY   *Great Neck, NY*
- Coached a local High School VEX Robotics Team #99588, Checkmate Robotics
- Used my experience with robot control theory like PID and Odometry to help teach and advance the team

Software Intern on Consumer Product Team   July 2022 – September 2022
Reddit Inc.   *Remote*
- Worked with Taxonomy Group which was responsible for managing statistics in order to classify subreddits
- Developed a script that created realistic synthetic data in order to test the accuracy of the ML models
- Added more detailed statistics pertaining to each subreddit, allowing them to be reviewed more quickly

Software Intern on Consumer Product Team   July 2021 – September 2021
Reddit Inc.   *Remote*
- Created comprehensive unit tests to catch bugs before deploying to production
- Worked with tools such as BigQuery and Cassandra to send notifications reminding moderators to fill out surveys

PROJECTS

Dolphin Emulator | *C++, GLSL, JIT Recompilation, Hardware Hacking*   September 2022 – Present
- Improved emulation performance for low-end devices through dynamically modifying video interrupt timings
- Introduced mathematically accurate and comprehensive resolution scaling for improved image quality

Flying Dutchman | *Rust, Min Max, Alpha Beta Pruning, Chess*   June 2023 – July 2023
- Developed a Chess Engine in Rust that achieved an Elo of 2700
- Familiarized myself with Rust & Alpha Beta Pruning in order to optimize the engine