Sam Belliveau

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Education

Cornell University, College of Engineering

Ithaca, NY

Bachelor of Engineering in Electrical and Computer Engineering

Expected May 2026

Related Courses: Discrete Structures Computer Science I - III, Digital Logic & Computer Organization, Differential

Equations, Linear Algebra, Data Science for Engineers, Embedded Systems

GPA: 3.9 **SAT:** 1540

Skills

Languages Technologies

 $C++,\,C,\,Python,\,Java,\,Verilog\,\,HDL,\,Go,\,SQL,\,Rust,\,Swift,\,HTML,\,JavaScript,\,GLSL,\,Bash/ZSH$

Git, Linux / POSIX API, OpenGL, Robot OS (ROS), Cassandra, BigQuery, Numpy, Scipy, PyTorch

Work Experience

Cornell University Autonomous Underwater Vehicles

November 2023 - Present

Cornell University Project Teams

Ithaca, New York

- Introduced more robust control algorithms for maintaining constant position and velocity on the submarine.
- Improved tuning protocols in order to achieve more robust tuning in limited pool testing time allotted by Cornell.

Signal Analysis Internship

January 2023 - May 2023

Feinstein Institute for Medical Research

Manhasset, New York

- Developed Sharp Wave Ripple (SWR) detectors with Python/Numpy to analyze EEG data, previously a manual job.
- SWR's are used to predict the onset and location of seizures, and potentially play a pivotal role in memory formation.

VEX Robotics Coach

October 2022 – May 2023

PLAYIDEAs NY
Coached a local High School VEX Robotics Team #99588, Checkmate Robotics.

Great Neck, NY & Manhattan, NY

- Used my experience with robot control theory like PID and Odometry to help teach and advance the team.
- Reddit, Consumer Product Team, Software Engineering Intern

July 2022 – September 2022

Reddit Inc

Remote

- Worked with Taxonomy Group which was responsible for maintaining statistics about each subreddit to classify them.
- Created a standardized Initialization Script that pulled more accurate production data into a local testing environment.
- Added more statistics pertaining to each subreddit, allowing them to be reviewed more quickly.

Reddit, Consumer Product Team, Software Engineering Intern Reddit Inc.

July 2021 – September 2021

Remote

- Created unit tests for a Crowd Sourcing microservice to test code before deploying it to production.
- Worked with tools such as BigQuery and Cassandra to send notifications reminding moderators to fill out surveys.

Project Experience

Dolphin Emulator

September 2022 - Present

Open Source GPL Project

Remote

- Improved emulation performance for low-end devices through video interrupt adjustments.
- Introduced mathematically accurate and comprehensive resolution scaling for improved image quality.
- Innovations headlined in December 2022 and August 2023 progress reports.

StuyLib

September 2019 – June 2022

StuyPulse Robotics (FRC)

Stuyvesant High School, New York, NY

• Primary developer of StuyLib, a 5-time award-winning FRC toolkit designed to streamline robotics programming. The library offers a variety of utilities including Gamepad and Computer Vision Libraries, Digital Filters, and advanced control theory functions. Began development sophomore year and promoted open-source development.