Elijah Retzlaff

(541) 282-4650
elijah.retzlaff@columbia.edu
riverray121.github.io/elijah-website.github.io/

New York, NY
github.com/riverray121
linkedin.com/in/elijah-retzlaff/

EDUCATION

Columbia University   New York, NY
B.A. in Computer Science | GPA: 3.90/4.00 | ACT 35   2023 – 2025

- Relevant Coursework: Parallel Optimization for Robotics, Computer Architecture, Advanced Programming in C, Artificial Intelligence, Linear Algebra for ML
- OpenVest Spring 2024 SWE Internship at FinTech startup (Columbia Business School)
- Transferred from Tufts University School of Engineering

SKILLS AND TECHNOLOGIES

Languages: Python, C, C++, PHP, HTML, CSS

Technologies: Flask, Docker, Cuda, ROS1/ROS2, MoveIt, Arduino

Cloud/DevOps: Azure DevOps, AWS, GCP

Tools: Fusion 360, Solidworks, Git, Fabrication (Woodworking, 3D Printing, Welding)

EXPERIENCE

SmartEd Systems, LLC   Remote
Software Engineering Intern   Jun. 2024 – Aug. 2024

- **Enhanced Security with MFA**: Integrated Google, Microsoft, and Email Multi-factor Authentication (MFA) for 3 school districts, improving login security and compliance.
- **Streamlined User Experience with SSO**: Implemented PowerSchool Single Sign-On (SSO) using PHP and JavaScript, reducing login friction for 400+ users and increasing system adoption.
- **Secured New Clients through Canvas LTI Integration**: Developed Canvas LTI 1.3 integration (OAuth & OIDC) for SES PHP web app, leading to a district-wide contract based on feature demand.

Innovations Health Devices, LLC   Citrus Heights, CA
Product Manager   Feb. 2021 – Aug. 2022

- **Led Product Development of Kinoped Medical Robot**: Directed a cross-functional team of 10 engineers, delivering a fully functional prototype within 10 months. (Visual Link | Google Drive Link)
- **Optimized Resource Management**: Managed development sprints, monthly budgets, and mitigated project setbacks while maintaining team motivation under tight financial constraints.

Software Engineering Intern   May 2020 - Sep. 2020

- **Developed Robotic Control Software**: Built a robotic simulation and control system using ROS, Gazebo, MoveIt, C++, and Python, enhancing robotic functionality and testing.
- **Contributed to Medical Device Designs**: Provided technical input on machine designs, creating detailed technical documentation and performing simulations using MATLAB and Fusion360.

PROJECTS

- **MultiPlaylists - Jan. 2023**: Developed a cross-platform music player app integrating Spotify and SoundCloud for playlist creation using SwiftUI, Combine, Spotify SDK, and SoundCloud API.
- **Jump Scheduler - Sep. 2022**: Built a web-based course scheduling platform for middle schools using Flask, AWS Elastic Beanstalk, and Stripe for payment processing.