

ALLEN LU

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OBJECTIVE: Highly motivated student with a strong background in math and excellent programming skills, seeking to build skills and contribute through a summer internship.

EDUCATION

Carnegie Mellon University, School of Computer Science - Pittsburgh, PA May 2023

Bachelor of Science in Computer Science

Relevant Coursework: Introduction to Machine Learning, Principles of Functional Programming, Introduction to Computer Systems, Probability Theory, 3D Calculus, Parallel and Sequential Data Structures and Algorithms

High Technology High School - Lincroft, NJ June 2020

High School Diploma - Adrian Giglio Memorial Scholarship winner

SKILLS

Languages/Frameworks: Java, Python, C, C++, Javascript, HTML, Node.js, React, Laravel, SQL

Technologies/ Developer Tools: OpenCV, TensorFlow, MongoDB, Firebase, Android Studio, MATLAB

PROJECTS

Slide Nightlife | *Javascript, AWS, Node.js, SQL, MongoDB, Firebase* May 2021 - August 2021

Software Development Summer Intern

- Web and mobile application to unify nightlife by centralizing club/client information and allowing users to pay, earn rewards, and socialize at all nightclubs with one app.
- Independently created automated onboarding for the enterprise application using Node.js and Postman as well as periodic, automated billing using Stripe and Braintree API.
- Designed and implemented complex aggregations on MongoDB Compass to dynamically update enhanced data analytics for clients.

Princeton Plasma Physics Lab | *Python, Paraview* January 2020 - June 2020

Researcher

- Projected 2D map onto 3D curved surface while preserving 21 million pixel resolution using Albers Projection, triangulation, and bilinear interpolation on Python
- Utilized visualization software such as POV-Ray and Paraview

Monmouth University | *Javascript, HTML, CSS, React, Laravel, Firebase, PHP* June 2019 - December 2019

Software Developer - Summer Research Program

- Developed web applications for children with disabilities in order to help keep track of goals and daily routines to form good and healthy habits.
- Utilized Laravel PHP framework alongside Vue.js, HTML, Bootstrap, and CSS to implement dynamic and interactive interfaces to improve children engagement.
- Published paper and presented project at "The 5th IEEE International Conference on Collaboration and Internet Computing" in LA.

Stevens University | *Python, OpenCV, MeshLab* June 2019 - August 2019

Summer Software Development Intern

- Conducted research on 2D camera geometry and ORB feature detection using computer vision software OpenCV on Python to project depth from 2D images into 3D computer models.
- Visualized 3D meshes and Delaunay Triangulations using MeshLab in order to model the 3D environment around the robot.

SELECTED AWARDS

VEX Robotics 2020 World Championship qualifier

USA Computing Olympiad(USACO) Gold Division

American Invitational Mathematics Examination(AIME) qualifier

HOBBIES

High school varsity tennis starter

September 2016 - June 2020

Volunteering/community involvement, golf, basketball