

Andrew Zhao

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Education

Carnegie Mellon University

Pittsburgh, PA

Major: Electrical & Computer Engineering

Minor: Robotics

QPA: 4.0, May 2021

Centennial High School

Ellicott City, Maryland

Skills

Programming

Python, C, Java

JavaScript, HTML/CSS

Design

Web development

Adobe Illustrator, Photoshop

Solidworks, Autodesk Inventor

Awards

15-112 Fall '20 Term Project: 1st Place

Hack-112: 2nd Place Project

Research

National Graphene R&D Center

Youth Researcher Summer 2017

Co-Authoring "Discovery of Transition Metal Doped Borophene Materials for Spintronics," where I conducted first-principles computational physics research and proposed a novel material structure for quantum computing applications

Experience

Jet Propulsion Laboratory

Backend Web Development Intern Summer 2021

Built a containerized backend web architecture to modernize JPL's internal services, employing Kubernetes-based orchestration to improve reliability and scalability of services. Prototyped in Node.js, Docker, and Minikube, and injected Istio to automate canary deployments.

Laerdal Medical

Product Development Intern Winter 2020

Designed a virtual auscultation simulator web app with JavaScript and HTML/CSS for medical training purposes. Prototyped extensively with web audio formats to playback and modify high fidelity sounds.

Johns Hopkins University - APL

Full Stack Web Development Intern Summer 2018

Assisted in design and testing of internal web applications. Constructed demo front-end UI with HTML/CSS, Ajax. Created sample database with SQL.

Projects

Beat Slicer

November 2020

A computer vision rhythm game, written in Python that features OpenCV motion tracking and a 3D engine written from scratch.

Voted 1st Place out of 450+ student projects.

Centennial EagleTime Attendance System

Project Manager 2018

Organized design, construction of web application. Features intuitive UI, authentication, database backend. Currently in use by ~1600 students and staff.

Centennial Tri-M Website

Front-End Design 2019

Created branding, graphic design assets for a volunteer event coordinating system.