

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-Authored "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 web service architecture to modernize JPL's internal services, employing Kubernetes-based orchestration to improve reliability and scalability of services. Injected Istio to automate canary deployments and improve security. Prototyped in Node.js, Docker, and Minikube.

Laerdal Medical

Product Development Intern Winter 2020

Designed a virtual auscultation simulator web app with JavaScript and HTML/CSS for medical training purposes. Prototyped with web audio frameworks to modify and accurately play 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 Python-based computer vision rhythm game, featuring OpenCV motion tracking and a 3D engine written from scratch.

Voted 1st Place out of 450+ student projects.

High School Attendance System

Project Manager 2018

Organized design, construction of web application with original UI, user authentication, and database. Currently in use by ~1600 students and staff.

Tri-M Volunteer Coordinating Web App

Front-End Design 2019

Created branding and graphic design assets for an event coordinating website for honor society members.