Alexander N. Dimopoulos

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Website Portfolio: andimo11.github.io

PROJECTS

NASA Space Apps 2018 Hackathon - *Event Lead Organizer*

Pasadena, California

- As the lead organizer of the NASA Space Apps Hackathon Pasadena 2018 I planned and managed the event which took place over three days at two locations with sponsorships from Google, Amazon Web Services, Microsoft Azure, and several local community organizations.
- The hackathon hosted 200 people, provided meals and beverages, and included presentations from members of JPL, UCLA, UCSF, and CalTech. Two of our teams went on to present their projects to NASA in a global competition at the Kennedy Space Center.

Triton RoboSub Team - *Software and Machine Learning Team*

Tools: Pytorch, OpenCV, ESPNetV2 ML model, Python, and ROS

- My team and I are building an autonomous robotic submarine to compete in the RoboNation International competition where we place above both UC Berkeley and CalTech last year. The event will be hosted in August at the Navy base here in San Diego.
- I am on the Machine Learning Team and we are utilizing the ESPNetv2 object detection model in order to analyze sensor input and to provide navigation directions to the sub using image recognition and sonar data.
- My primary task has been adapting the ML model for our specific challenges which includes navigating along a path, guiding the sub between course obstacles, and locating and firing a torpedo at a target.

Automated Day Trading Bot - *Python*

Utilized: REST API, Web Scraping, JSON, and simulated monetary exchanges

- I built an automated stock trading script which analyzes real time market data and coordinates the buying and selling stocks based on custom statistical parameters.
- It includes a simulated wallet which allows for the modification of trading strategies without the risk of financial loss.

Nomad - *AR Virtual Workspace*

Tools: Swift and Xcode

- My partner and I are working on a project where we are designing an AR platform which displays web browsers and smartphone applications in a virtual office.
- The goal of this project is to create a tool which can be used my students and professionals to increase efficiency and allow for productive remote work in any location.

Reverse Polish Notation Calculator - *C++*

Pasadena City College, C++ Object Oriented Programming

- For a class project my partner and I built a calculator from scratch which takes in a mathematical equation, converts it to polish notation, and then solves it using stacks and queues.

NASA 2017 Hackathon - *Awarded: Biggest Community Impact*

Berkeley, California

- My team built a website which utilizes data from a government API to provide users with information about their current air quality over a Google Map. Six months later Google implemented a similar tool into their system.

WORK EXPERIENCE

Database Management -*Pincus Professional Education*   **January 2018 — February 2019**

Pasadena, California

- My responsibilities included managing out database structure, updating systems, and designing new protocols for data processing.
- I also wrote an instructional which detailed how our system worked and helped train junior staff.

Senior Technology Manager - *Souvenir Coffee Roasters*   **February 2017 — January 2018**

Berkeley, California

- My responsibilities included managing online sales, running the website, and analyzing sales data to organize and prepare inventory.
- I also set up and maintain technological aspects of the business such as internet, security and audio systems.
- Provide feedback to our roasters on product quality and organize business meetings with our partners.

SKILLS

Pytorch: Self taught through my own interest and projects with new skills being obtained through RoboSub.

Swift: Self taught and used to build applications which have been hosted on the App Store.

C++: Learned in college with object oriented programming and utilized in my Honors Discrete Math course.

Python: Self taught, I have worked with Python analyze data and build personal and hackathon projects.

Javascript, CSS & HTML5: Self taught through building my own website and contract work for small businesses.

EDUCATION AND ACHIEVEMENTS

University California San Diego – Cognitive Science with Specialization in Machine Learning
GPA: 3.50   Graduating: Spring 2021
I was accepted to UCSD for the Math and Computer Science major, however once there I learned of a new a fascinating department, the first of which had been founded on the very campus, Cognitive Science. With a specialization in Machine Learning I have the ability to focus more of my courses towards ML and get to learn about data science, technology design, and human computer interaction. This balance allows me to learn the technical aspects of my field and gives me insight about product and user interface design.
- *Triton RoboSub Team*
- *Ocean Lovers Club*
- *Jiu Jitsu Club*

Pasadena City College – Computer Science and Mathematics
GPA: 3.67
I completed every math and computer science course offered at PCC before transferring to UCSD in Fall 2019.
- *Vice President of the Computer Science Club*
- *Vice President and Treasurer* of the *Math Club*
- *Planetary Society Headquarters Volunteer*
- *Honor Roll Student*
- *Math Engineering Science and Achievement Honors Transfer*
- *Wells Fargo $3000 Scholarship*

ABOUT ME

Future Projects - I am currently working with my mentor who works at the NASA Jet Propulsion Laboratories to design a research proposal for CalTech's SURF program which I aim to complete next fall. He is a member of the CoSTAR team which is designing autonomous robots to compete in the DARPA Subterranean Challenge and I hope to do research which studies implementing machine learning models in autonomous systems with decreased latency.
Personal - I was raised in Pasadena, lived in Berkeley, and enjoy coffee and learning new things. In my free time I love to cook, read, and practice Jiu Jitsu.