OSCAR SU

github.com/osu28 | Fairfax, VA | osu@purdue.edu
linkedin.com/in/oscarsu28 | DOD Secret Clearance | 607-759-4491

Education

Purdue University **May 2024**
Bachelor of Science, Majors: **Computer Science** and **Data Science**
Coursework: Data Structures & Algorithms, Data Mining & Machine Learning, Statistics for Data Science, Linear Algebra, Probability, Computer Architecture, Statistical Theory

Thomas Jefferson High School for Science and Technology **May 2020**

Experience

Adaptive Biotechnologies
Software Engineer Intern **Jun 2022 – Present**

- Developing a deployment validation and management console using React with TypeScript to track Terraform module configurations.
- Utilizing Auth0 to authenticate users and provided automated software testing and builds using Gradle.

CACI
Machine Learning Intern **Mar 2022 – Jun 2022**

- Proved technological capability of using artificial intelligence and augmented reality to provide situational awareness to warfighters/emergency responders by allowing users to see through obstructions.
- Used a multi-object tracking engine to detect object tracks given live streaming video – outputted in JSON to a distance predictor model written in PyTorch – georectified to geodetic coordinates (latitude, longitude).
- Improved prediction accuracy by 12% and reduced overfitting bias by combining multiple models in a collaborative ensemble, with weighted averaging to produce optimal results.

Software Engineer Intern **Jun 2021 – Mar 2022**

- Developed use-case tailored tools, including file and comment export capability, contributing to the capture of a $250m contract with the U.S. Army.
- Conducted meetings with users to compose the correct architecture of features to maximize product value.
- Mapped REST API endpoints into GraphQL types to allow for easier querying of complex operations.

Academic Research

Purdue Data Mine x Masco
Data Science Undergraduate Researcher **Aug 2020 – May 2021**
Project: Identifying Consumer Design Preferences Using Social Media

- Created data mining automation software to collect user reviews and product features using Selenium.
- Identified points of high correlation between features and customer satisfaction using regression analysis.

Personal Projects

Gym Reservation App – *TypeScript, React* **Jun 2022 – Present**

- Minimizing waiting times at the gym by building an equipment booking app that generates a workout schedule for users to follow by strategically reserving machines based on availability and muscle groups.

Geospatial Classification AI – *Python, PyTorch* **Jan 2022**

- Created a convolutional neural network classifier with PyTorch to identify satellite imagery of major U.S. cities with 95%+ accuracy, trained on a dataset collected by automating data scraping.

Clubs & Affiliations

Purdue The Anvil, Machine Learning Engineer **Jan 2022 – Present**
Purdue Hack the Future, Backend Software Engineer **Jan 2022 – Present**

Skills

Programming & Utility Languages: Python, Java, JavaScript, TypeScript, C, R, SQL, HTML/CSS, Shell Scripting
Frameworks & Libraries: React, PyTorch, Node.JS, Pandas, NumPy, Scikit-Learn, Selenium, BeautifulSoup, Terraform, Auth0, StepZen, ggplot2
Platforms & Tools: Git, Jira, Gradle, Docker, MySQL, Determined AI, Postman, BigQuery, Tableau, Lucidchart