PRANAV CHAUDHARY

pranavc28.github.io | pranavc28 | pranavc@umich.edu | pranavchaudhary | (734)-730-2743

1929 Plymouth Rd. Apt # 4012, Ann Arbor, MI 48105

Education

University of Michigan, Ann Arbor — **Ann Arbor, MI**
Bachelor of Science in Engineering — **Graduating in 2023**
Major: Computer Science — **GPA: 3.63/4.00**
Clubs/Programs – TechLab at MCity, Materials Lab, Michigan Electric Racing, IEEE, Pi Tau Sigma, Bursley Multicultural Council

Skills

Languages – C++, C, MATLAB, Python, Java, MySQL
Web design – JavaScript, React.js, Vue.js, HTML, CSS, Google Analytics, Jest
IDE and Tools – Github, Gitlab, Agile, Visual Studio, VS Code, XCode, Docker, Linux, Bash, Git, SolidWorks, Siemens NX, Teamcenter
Awards - **Dean's List (2018 - 2019) | University Honors Award (2018 - 2019) | Pi Tau Sigma** – Honor Society

Experience

ITHAKA (JSTOR) — **August 2021 – Present**
Software Engineer Intern (Full Stack Role for FORUM web app) — **Ann Arbor, MI**

- Single handedly coded a mapping interface for pairing metadata with field types that reduced user interaction by about 40% and reduced the development cycle of the MVP by about 3 weeks. Wrote unit tests in Jest, and collaborated with the UI product designer.
- Interacted with users and watched several UI usability tests to create designs for development for at least 30 total hours after work.
- Created a rotate image feature that allowed users to rotate and publish images to the JSTOR web app, for about 50% of images.
- Solved prod issues and improved workflow for web app, which is tightly integrated with AWS, using Python, Vue.js and jest unit tests.

DeepMap Inc. — **January 2021 – Present**
*Software Engineer Intern (*TechLab at MCity *2020-2021 Cohort Member)* — **Ann Arbor, MI**

- Optimized vehicle routing using Google's OR tools to improve map navigation by providing color feedback for road changes.
- Created a tool to parse map output in JSON format to automate initial analysis, which reduced the development cycle by 1.5 months.
- Coded an interactive HD map using the networkx library, to show the path of traversing between roads and total road changes.

Innoviz Technologies — **August 2020 – December 2020**
*Software Engineer Intern (*TechLab at MCity *2020-2021 Cohort Member)* — **Ann Arbor, MI**

- Implemented a RESTful python controller that uses LiDAR to detect pedestrians, that may save 10,000s of lives in proving safety.
- Successfully integrated LiDAR hardware with perception software and used the MCity infrastructure API to change traffic lights.
- Used MCity traffic light APIs to relay real time data to controller, which allowed us to meet 100% of our project's KPIs.

Michigan Electric Racing (Formula Electric FSAE Team) — **August 2018 – November 2020**
Suspension Analysis Lead — **Ann Arbor, MI**

- Analyzed 1000s of tires data points for 2020 racecar using MATLAB plotting. The best decision out of 18 choices was made.
- Lead the team that selected and mounted potentiometer sensors, to analyze data and improve 70% suspension designs.
- Designed and analyzed suspension using Siemens NX and ANSYS. Manufactured jigs and components using Mill and Lathe.

Projects

LearnBud Web App — **June 2021 – August 2021**
Programmer — **Ann Arbor, MI**

- Created a Flask web app, using a MySQL database and a React.js UI, that dynamically matched students with similar interests.
- Used AWS RDS database with a MySQL setup to store data, and transform a google forms doc into a web app.
- Developed a backend service in Python using REST APIs to group students with similar interests.

Drone Delivery — **April 2021 – May 2021**
Programmer — **Ann Arbor, MI**

- Created a tool that implemented MST algorithms, such as Prims or Kruskals, to deliver packages in a provided graph.
- Implemented a branch and bound algorithm that pruned branches, and improved the run time and accuracy of the traversal.

Command Line Euchre — **May 2020 – June 2020**
Programmer — **Ann Arbor, MI**

- Utilized C++ to make a command-line interface for Euchre, a card game, using classes and polymorphic players.
- Developed complex, random bot strategies to simulate games, that were tested using unit test macro frameworks.

Piazza Post Classifier — **May 2020 – June 2020**
Programmer — **Ann Arbor, MI**

- Built a program that uses a machine learning algorithm to classify posts on Piazza, a website for asking questions, by grouping together posts that have similar key words and sentences. Tested extensively using unit test frameworks.

Autonomous Drones Course Navigation — **August 2018 – December 2018**
Programmer (Team of 4 members) — **Ann Arbor, MI**

- Coded a drone to autonomously navigate a maze in C++ using LiDARs, and implemented a PID control and response filters.