Catherine Kim

734-660-7855
catkims@umich.edu
https://catkims.github.io/portfolio/

Experience

MRover Project Team
Software Engineer
Sept 2020 - Present

- Organized a GUI, using CSS, HTML, JavaScript, and Vue, that interacts with the Rover in real-time by sending and receiving messages through LCM channels.
- Created an interface using Vue, that does an automated sequence dipping pH strips in water.

University of Michigan Medicine
Research Assistant
May 2021 - Aug 2021

- Radiology and lung cancer research, concentrating on using machine learning for detection of lung nodules in computed tomography.
- Deployed DCNN model on a training set of over 500 MRI scans, and graphed results using Excel

Rewriting the Code
Marketing Intern
Feb 2021 - May 2021

- Founded an RTC chapter at UM and increased existing RTC membership at UM by over 50% through coordinating social events and meeting with UM professors.
- Designed 20 graphic designs for social media content using Adobe Photoshop and Figma.

Projects

Pathfinder
C++
Fall 2021

- Designed an algorithm to solve the Traveling Salesman's Problem that calculates the optimal path in less than 30 seconds for any graph with 40 or fewer cities.
- Implemented a heuristic TSP that calculates close to the optimal path of 15000 nodes in less than 1 second.

Piazza Machine Learning
C++
Winter 2021

- Applied machine learning techniques to predict the subject of a Piazza forum post given its content with 90% accuracy.
- Trained program to associate certain word patterns with a particular subject using a simplified multivariate Bernoulli Naïve Bayes classifier.

Education

University of Michigan
BS Computer science and Cognitive science
Sept 2020 - May 2024

- Cumulative GPA: 3.8/4.0
- Relevant coursework: Data structures & algorithms (EECS 281), Introduction to Computer Organization (EECS 370), Foundations of Computer Science (EECS 376), Digital Product Design (ENTR 390)

Skills

Tools
- Figma
- Git
- Linux
- LaTeX

Languages
- C++/C
- HTML
- CSS
- JavaScript
- Python
- Vue

Soft
- Design research
- Prototyping
- Wireframing
- Usability testing