Miaoyu Wang

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Education

The University of Akron — Akron, OH
M.S. in Computer Science — *Aug. 2020 – Present*

The University of Akron — Akron, OH
M.S. in Polymer Science — *Aug. 2018 – May 2020*

Qingdao University of Science and Technology — Qingdao, China
Bachelor's in Polymer Materials and Engineering (Talents Program) — *Sep. 2014 – July 2018*

Professional Experience

Technologist Intern — Jan. 2022 – Present
Digital Clarity — *Cincinnati, OH*

- Converted Figma design to the web application by React, PostgreSQL, and JavaScript
- Converted Figma design to the web application by React, PostgreSQL, and JavaScript
- Converted Figma design to the web application by React, PostgreSQL, and JavaScript
- Explored ways to increase the accuracy of our object detection model
- Constructed the traffic, retail, and beauty theme to detect accidents and potential customers in videos

Research Experience

Real-time coronavirus detection | *OpenCV, YOLOv4, CNN, CUDA, Numpy, Python* — Aug. 2021 – Present

- Developed a real-time coronavirus detection model by custom YOLOv4 model
- Trained the model by coronavirus SEM images
- Used OpenCV to deal with videos and Numpy for data manipulation
- Achieved mean average precision of 89%

Parallel coordinate on a spiral surface | *Three.js, WebGL, JavaScript, Nginx, AWS, Linux* — June 2021 – Present

- Developed an online visualization website to display parallel coordinates on a spiral surface with less cluttering
- Used Three.js and WebGL to build the 3D spiral architecture
- Texture mapped the data to the spiral surface and deploy it to AWS EC2

Selected Projects

Lane marking detection | *OpenCV, CUDA, Numpy, Git, Python* — Mar. 2021 – Present

- Developed a Hough transform module to fit the lane
- Used OpenCV to deal with videos and Numpy for data manipulation
- Used Canny edge detection to find the lane and ROI mask to focus on the lane
- Collaborated with others through Git

Amazon copy | *React, Express, MongoDB, Mongoose, Node.js, Bootstrap* — Mar. 2020 – Aug.2020

- Built ecommerce website like Amazon by MERN stack
- Designed REST API to manage state of React application
- Utilized MongoDB and Mongoose to save and retrieve data
- Utilized React Router to implement a SPA

Technical Skills

Languages: Python, Java, JavaScript, HTML/CSS
Frameworks and Libraries: Numpy, OpenCV, Springboot, Three.js, WebGL, Mongoose, Express, React
Database: MongoDB, MySQL, Redis
Other: Git, Docker, AWS, Mybatis, Maven, Linux, CUDA, Tomcat, Node.js

Selected Awards

[2015]: 1st Prize, Mathematical modeling in Gaoxin Cup (Rank No.1)
[2015]: The First-Class Scholarship of Yokohama (1%)
[2016]: Honorable Mention, The International Mathematical Contest in Modeling(MCM)
[2016]: The First-Class Scholarship of Meichen (1%)
[2018]: Outstanding Graduate and Outstanding Graduation Thesis (2%)