Raymond Ku 谷愷瑞

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thekukaburra.com

Education

2018 - now University of Michigan - Ann Arbor, Ann Arbor, MI

BSE in Computer Science

Expected Dec 2021

Selected Courses

482 Operating System	445 Machine Learning	281 Data Structures and Algorithms
485 Web Systems	388 Computer Security	498 Natural Language Processing

Experience

Groundhog Technologies | Software Engineering Intern

2020

- Designed and implemented an automated testing suite using <u>Python</u> + <u>Selenium</u> and <u>Javascript</u> + <u>Jest</u>.
- Developed frontend features such as pagination and account management with <u>React</u>.
- Utilized <u>Grafana</u>, <u>ElasticSearch</u>, <u>Logstash</u>, and <u>Kibana</u> to perform QA tests.
- Experienced the full software development process from development, <u>Jenkins CI/CD</u>, to deployment with <u>Docker</u> and <u>Ansible</u>.

National Taiwan University | Research Intern

2017

- Assisted Dr. Ling Chao on the research of E. coli cell membrane and its proteins.
- Mastered various lab equipment, LabView, and COMSOL programs.
- Helped to create a program with LabView that controlled various lasers and motors.

Personal Projects

Clothing Classifier | Machine Learning

2020

- Built a DenseNet CNN to predict types of clothing from images.
- Improved training via image augmentation techniques such as cropping, distortions, and adjustments to hue and brightness.
- Tuned hyperparameters and selection of activation function to achieve 61% accuracy.

PhotoOp | Web App

2020

- Built a multi-threaded indexer in <u>C++</u> to quickly index 30,000+ family photos.
- Used a Postgres database to store the indexed information.
- Built an API with <u>NodeJS</u> and a website with <u>React</u> to allow my family to query photos by date and or location keywords.

ZeroHero | Mobile App

2018

- App that suggests recipes based on pictures of leftover ingredients.
- Built an image recognition model using Google AutoML with 2,000+ images.
- Developed a cross-platform app using <u>React Native</u>.

Computer Languages: Python, C++, JavaScript, C#, Bash, SQL

Framework / Tools: Git, Unity, Selenium, React, PyTorch, Postgres, Docker

Natural Languages: English, 中文 (Mandarin Chinese), Español (Spanish)