Qiuyang, Zhang

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EDUCATION

Carnegie Mellon University   Fall 2023
• M.S. in Software Engineering
University Of North Carolina at Chapel-Hill   May 2022
• B.S. in Computer Science and Statistics (GPA:3.9/4.0)
• Honors: UNC Dean's List Fall 2018 - Spring 2022

SKILLS

Programming Languages: Python, Java, C, Shell, R, SQL, JavaScript, TypeScript, Swift, HTML, CSS
Frameworks: NodeJS, MongoDB, React, Redux, Express

RELEVANT EXPERIENCE

Software Development Engineer Intern, Amazon.com Inc   05/2023-08/2023
• Applied Apple's iOS Edge Saliency Model within the Vision framework supported by Neural Engine to generate bounding boxes for salient regions and performed smart cropping on images in Swift.
• Assessed model performance on more than 1.5k images across diverse image datasets, including selfies, food, and landscapes.
• Developed a visual prototype in XCode showcasing the real-time impact of smart cropping and enabled side-by-side comparison with the baseline model.
• Conducted comparative analysis among the iOS Edge Saliency Model, the baseline model, and the Amazon In-House Saliency Model. Evaluated performance metrics such as latency and IoU score, providing actionable insights and suggestions for future enhancements.
· Uploaded the test beta version to Testflight to ensure the functionality's accessibility in later builds.

Research Assistant, UNC Graphics & Virtual Reality Group   02/2021-05/2022
• Trained a ResNet body-segmentation model on human body images to perform human body segmentation tasks and collaborated with a Postdoc on a 3D body reconstruction project. Improved the overall IoU score through propagation module. Annotated hundreds of images to finetune the model.

Backend Intern, Shenzhen Gridsum Technology Co., Ltd.   05/2021-07/2021
• Led the development of backend for three products using Java Spring Boot, MyBatis, and MySQL.
• Integrated 20+ APIs using Postman and API documentations, greatly increasing the app functionalities.

Research Assistant, Biomedical Research Imaging Center IDEA Lab at UNC   02/2020-08/2020
• Led the development and training of Convolutional Neural Networks (CNN) on Alzheimer's Disease Neuroimaging Initiative (ADNI) datasets to do three-way image classification with a Postdoc.
• Utilized transfer learning and attention mechanisms to identify which brain regions can be used as indicators of Alzheimer's Disease.

CLASS PROJECTS

Incident Response App - 18653 *Software Engineering Method*   01/2023-05/2023
Tech Stack: Docker, React, Redux, Socket.IO, MongoDB, Jenkins, Jira
• Engineered an emergency app for both the citizens and first responders to deal with emergent incidents using React, Socket.IO, MongoDB. Resolved 50 story points within three Sprints following a Scrum methodology. Designed the prototype in Figma and identified reusable Antd components. Wrote comprehensive test suites and achieved Test Driven Development (TDD). Refactored the codebase and deployed using Docker and AWS.

Emergency Social Network App in 18652 *Foundations of Software Engineering* 08/2022-12/2022
Tech Stack: HTML, CSS, Typescript, NodeJS, Express, MongoDB
• Built an Emergency Network app for real-time communication using HTML, TypeScript, NodeJS, and Mongo DB. Developed the app iteratively with a hybrid of Scrum and Kanban practices. Navigated through phases including User Story, Object-Oriented Analysis, Prototype, Testing, and CI/CD. Established a living Haiku document.