Ruijie Zhang

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EDUCATION

New York University
Sep 2019 - Jun 2023, New York
B.S. Computer Science; B.S. Econometrics.
Major GPA: 3.6
Courses: Data Structures, Computer System Organization, Intro to Algorithms, Discrete Math, Analysis, Algebra

SKILLS AND OTHERS

- Languages: Java, Python, C/C++, SQL, Swift, Javascript, Matlab, HTML/CSS, Go, Haskell
- Skills: Git, Unit Test, Log, AWS, Docker, OOP, Charles Proxy, Linux, Tensorflow, Pytorch, Scikit-learn
- Open Source Contribution: Tensorflow, Keras, MMdetection
- Published Products: CoCreate (4.5 10.3k downloads), ItemMemo (4.6 12.2k), TimeStatistics (4.9 4.22k)

PROFESSIONAL EXPERIENCE

Supersymmetry [App Store]
Software Development Engineer (Jan 2021 - May 2021)
- Corporate with 8 colleagues from frontend and 4 colleagues from backend to develop iOS client of a social media app: Project Z with Swift and RxSwift
- Implemented the chat room function of the app; wrote reusable UI components with SnapKit; used Moya to abstract API call and WebSocket for real-time communication; integrated Agora API for real-time voice chat; applied SDWebImage for image caching to increase performance
- Wrote scalable and backward compatible code by communicating with colleagues from backends
- Performed code review to iterate quickly while maintain code quality

PROJECT EXPERIENCE

CoCreate App [App Store]
Full-Stack Developer (Oct 2019 - June 2021)
• Frontend: An iOS app supports real-time collaboration with drawing board based on Apple Pencil
• Backend: Applied Flask and Socket.IO for real-time communication to design a http server with REST API
• Python unittest for unit test, SQL for data persistence, built a stress test pipeline for socket.io performance profiling, git for version control
• Deployed via Docker Container on AWS, integrate Google Analytics to gain feedback, applied Sentry for logging
• Published on App Store and got 10k+ downloads, 10k+ boards created by users

FastDraw Library [Github]
Developer (Oct 2019 - June 2021)
• Published the first swift drawing library on Github supports pencil, eraser and lasso via CocoaPods
• Designed an algorithm to produce a smooth hand-writing curve with Core Graphics
• Implemented a data structure indexing drawings; an algorithm determining lasso drawn by user; GCD multithreading library for parallel computing for lasso function; achieve 100 times speed up
• Applied Delegate and Singleton design pattern to achieve modularity and extensiveness

Computer Vision Model [Kaggle]
July 2021 - August 2021
• Built a model to detect abnormal area and determine if patient has Covid-19
• Preprocessed data with pandas, visualize radiographs with matplotlib and pydicom, performing EDA
• Trained a Cascade R-CNN for object detection with mmdetection; an EfficientNet for classification with keras

Open Source Experience [Github Pull Request]
September 2021 - October 2021
• Implemented function to calculate FLOPS of YOLACT in a computer vision library mmdetection
• Studied source code of mmdetection, application of pylint, pytest, codecov for Continuous Integration
• Refactored code according to code review of mmdetection core team members, merged into main branch