

Yiyang Shao

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Education

Duke University

Aug 2022 - May 2024

M.S. in Computer Science; GPA: 3.78

New York University

Sep 2018 – May 2022

B.S. in Computer Science, Honors Mathematics; GPA: 3.85

Languages and Technologies

- **Languages:** Python, Javascript, C, Java, Swift, SQL, R
- **Technologies:** Git, React, Vue, Node, Cypress, Docker, Linux, REST, Pytorch, Pandas, Agile
- **Courseworks:** Web App Dev, Mob App Dev, Operating Systems, Algo and Data Structure

Professional Experience

Zillow | Software Development Engineer Intern

May 2023 – Aug 2023

- Established the success webpage for Zillow Home Loan, leveraging React for frontend and Python for Backend, integrating with pricing, database, clickstream, and documentation services
- Utilized React to enhance the data security clues of Zillow's home loan website, increasing third party leads by 25%
- Launched Zillow home loan service in New Jersey, contributing to establishment of a new market

Iflytek | Core Technology Researcher Intern

May 2020 – Aug 2020

- Spearheaded the development of a high-resolution Deep Neural Network, achieving state-of-the-art performance (45% MIOU) on the ADE20K Dataset for pixel-level image semantic segmentation tasks
- Conducted comprehensive control experiments involving ACFnet, OCnet, Efficientnet, etc.
- Extended the research findings to video semantic segmentation and semantic segmentation with interaction

Selected Projects

Solving generalized sorting with ELO-rating system

Mar 2021 – May 2022

- Designed and developed a practical generalized sorting algorithm based on the ELO-rating system, surpassing the performance of existing theoretical algorithms in applicational experiments
- Proposed an optimal random sorting algorithm specifically tailored for generalized sorting and mathematically proved its optimality and time-efficiency
- Conducted comprehensive applicational tests using Python in various contexts to demonstrate the practical efficiency of the ELO sorting algorithm

IOS app development for Gather Green

Feb 2023 – May 2023

- Established an iOS shopping app using SwiftUI as the frontend framework, serving as a marketplace for users and inventory management tool for administrators
- Integrated Vapor as the backend framework to handle server-side operations, and implemented PostgreSQL database to store product information, user data, and other relevant details
- Deployed the app to the App Store and integrated Apple Pay functionality

Mmap Implementation and evaluation in xv6 | Group Project

Oct 2022 – Dec 2022

- Implemented Mmap and Munmap functionality in C in XV6 system kernel, saving system calls and creating an efficient endpoint to access file data
- Modified Proc Struct, fork, exit, and page fault handler, to allow sharing physical pages between parent and child process
- Designed micro-benchmarks and macro-benchmarks to evaluate the performance of Mmap, saving 83% reading time and 69% writing time compared to normal file operations