RUI CHEN

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EDUCATION

Expected in May 2022
Bachelor of Arts: Computer Science and Applied Mathematics
University of California, Berkeley | Berkeley, CA • Cumulative GPA 3.92

RELEVANT COURSE WORK

- ***CS Courses***: **Algorithms**, **Operating Systems**, **Databases**, **Machine Learning**, Computer Graphics, Data Structures, Computer Architecture, Full Stack Deep Learning, Structure and Interpretation of Computer Programs
- ***Other Courses***: **Probability Theory**, **Linear Algebra**, **Numerical Analysis,** Complex Analysis, Designing Information Devices and Systems

WORK HISTORY

May 2021 - Aug 2021
Software Engineer Intern
Amazon - Seattle, WA

- Designed, implemented, and tested a low-latency, scalable, restful search engine in **Java**, AWS Smithy, and AWS Lambda that allows users to query checkout information in the cloud and facilitates over 400 employees
- Deployed the service on **AWS**; Built a website for the service through **React** and **JavaScript**

Aug 2019 - Dec 2020
Software Developer
UC Berkeley Energy and Resource Department - Berkeley, CA

- Worked with a team of four, designed & implemented a carbon emission prediction model for the California Department of Transportation (**Python**)
- Designed & implemented data pipeline for 180 million entries of transportation data (**Python, R**)

Jun 2020 - Aug 2020
Machine Learning Intern
Cambricon - Remote

- Collaborated with team members to reproduce the Computer Vision paper *"EfficientDet: Scalable and Efficient Object Detection"*
- Developed computer vision solution for breast disease detection and prediction, achieving 89.7% accuracy, outperforming human experts.

NOTABLE PROJECTS

PintOS (ANSI C)**:**
- Designed and implemented a priority scheduler with priority donation, a file system, and 14 thread-safe syscalls for for this educational operating system on a team of four

Streaming Data Surveillance & Alert Module (Java):
- Implemented the event-alarm functionality for a proprietary Time series database
- Supported options for tracking and recording for arbitrary pieces of data, static/dynamic data filtering

Traveling Purchaser Problem (TPP) Optimizer (Python): https://github.com/ziyaointl/CS170-Traveling-Rao
- Implemented heuristics for the NP-Hard problem TPP
- Used Kubernetes to parallelize on 100 GCP nodes
- Ranked 9th in a course competition of 300+ teams

TECHNICAL SKILLS

- **Languages**: Python, Java, C, SQL, R, C++, JavaScript, Bash
- **Technologies**: Numpy, React, Pytorch, MongoDB, Git, AWS, Linux

ACCOMPLISHMENTS

- 2020 Citadel Terminal Competition School's First Place
- 2017 Waterloo University Euclid Math Contest Global Top 0.1%, School 1st Place
- 2017 American Physics Bowl Global Top 50, 0.01%, School 1st Place