Rohan Yogesh Deshpande

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Education

RUTGERS UNIVERSITY New Brunswick, NJ
Bachelor of Science, Major in Computer Science, Minor in Mathematics Expected: May 2024
GPA: 3.7 / 4.0
Awards: Dean's list, and Alan Marc Schreiber Memorial Scholarship.
Relevant Coursework: Operating System Design, Data Structures and Algorithms, Linear Algebra, Scientific and Technical Writing.

Skills

Languages: Python, C, Java, HTML/CSS, Typescript/Javascript, Clojure
Spoken Languages: English, Hindi, Marathi, Japanese, French
Technologies: Git, Docker, Kubernetes, REST API, gRPC, Operating System Design, Node.js, React.js, Django, Flask, Protocol Buffers, Azure Cloud, AWS Technologies, Microservices
Work Authorization: India, Japan, United States of America

Experience

KPMG IGNITION TOKYO (KPMG JAPAN) Tokyo, Japan
Software Engineer Intern May 2022 - August 2023

- Led development of an in-house **file comparison software** at KPMG Japan, slashing false positives by **48%** and accelerating processing by **60%** compared to Adobe PDF comparison methods.
- Effectively minimized **post-pen testing** security vulnerabilities within the application's **Kubernetes cluster and Django backend**, all while meeting stringent production release timelines.
- Architected and developed a comprehensive **property-based testing framework** in **Clojure** for **REST APIs**, assessing functionality and security across varying firewall conditions, and initiating adoption within the company.
- Designed and implemented a **caching microservice**, reducing processing time by **30-50%** for a major company application.
- Led and organized a series of company-wide knowledge-sharing sessions, which collected more than **⅔ of employees** and contributed largely to context sharing and transparency across each division.
- **Technologies:** Django, Python, Clojure, Automated Testing, Algorithms, Kubernetes, Docker, Microservices

RUTGERS UNIVERSITY, DEPARTMENT OF GENETICS New Jersey, USA
Research Assistant May 2021 - May 2022

- Led the development of a software platform using **Python**, **OpenCV, and Arduino** enabling researchers to conduct **Optogenetics** experiments while seamlessly recording **real-time** video and experiment data.
- Significantly contributed to automating experiments, streamlining data collection, and improving the overall efficiency of researchers with non-technical backgrounds.
- **Technologies:** Python, OpenCV, Arduino, Statistical Data Analysis

WHIZ.AI New Jersey, USA
Software Engineer Intern November 2021 - January 2022

- Reduced the latency of APIs by developing efficient back-end functionality to support **language models** using **Python**, **Flask, and Postman.**
- Implemented and benchmarked an intermediate database cache with **SQLAlchemy** API that **reduced** database fetch time by over **90%.**
- Increased the efficiency of engineers by integrating and documenting **Alembic** for easier database schema migrations.
- Collaborated and supported multiple machine learning engineers and data scientists worldwide using tools such as **Jira** in an agile environment.
- **Technologies:** Python, Databases, Flask, REST APIs, Language Models, Microservices

HEALCO INC. New Jersey, USA
Fullstack Engineer Intern May 2020 - February 2021

- Architected, developed, and deployed HealCo's press release web app with robust identity access management, press sharing functionality, and administrative features using **NextJS, TypeScript, PostgreSQL, Twilio, SendGrid, and Stripe.**
- Built a production-grade, scalable, and cost-effective DevOps system and CI/CD pipeline for all HealCo apps using **AWS, Docker, and GitLab CI/CD.**
- Migrated the entire codebase from **JavaScript to TypeScript** to reduce bugs and improve maintainability.
- Integrated **Stripe** into the web application to enable payments by ACH debits and credit cards.
- **Technologies:** AWS, Node.js, Next.js, React.js, Typescript, Javascript, MySQL, PostgreSQL, Docker, Microservices

Featured Projects

GOOD EATS - Full-Stack Nutrition App:

- Developed a full-stack web application using React and Node.js for users to obtain nutritional information from images of food items.

PTHREAD CLONE - Custom C Thread Library:

- Designed and benchmarked a custom C library to implement Posix Threads (pthread) in user space, including thread mutex, scheduler, and essential thread functionality.

MULTITHREADED WORD WRAP - Concurrent File Processing Tool:

- Created, tested, and documented a command-line interface (CLI) in C that uses producer-consumer threading to concurrently format (word wrap) text files in multiple directories and subdirectories.