Talha Aamir

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EXPERIENCE

Ricult - Full Stack Software Engineer (June 2020 - Present)

1. Worked with RnD to develop an entire **analytics feature** built on **google maps** using **AngularJS**, that can handle clustering and rendering **2 million +** farms **all across Thailand and Pakistan**, generating more than **$500,000** in company revenue.
2. **Optimized** a key api endpoint in **Flask (Python) by 90%** to scale **from 1000 farms to 2 million+ farms**.
3. Developed a **general scripting language** on top of **python**, to allow the entire ricult team to send **push notifications** to ~**200,000** devices.
4. Project Lead and Core maintainer of backend test framework in **Python** using **Pytest**
   - **Enabled faster rollouts** and led to a **2x speedup in feature release times**.
   - Setup DB isolation for test suites using **sqlite**.
   - Setup Code Coverage reports using **coverage** and **py-cov**
   - Setup monitoring of slowest server endpoints to allow the team to **improve** application **response times** by **70%**.
   - Setup **Load Testing** using **Locust**.
5. Project Lead and Core Maintainer of the CI/CD Pipeline using **Gitlab-CI** and **Docker**
   - Setup a **CI/CD** pipeline runner using **AWS EC2**, and **Docker**
   - Setup the pipeline instructions file to execute tests and deploy to all relevant environments.
   - Helped **speed up rollout times** by **40%**, and reduced production errors by **60%**.
6. **Identified** a key issue with the in house fetch library written in **AngularJs**, and undertook the project of rewriting the entire library, resulting in an implementation that **improved response times** by **50%**.

OPEN-SOURCE

[OpenAge](#) ([Issue Link](#)) **Identified an issue** with the make steps of the project, that was occurring on **multiple debian based platforms**. Proceeded to create a card and **added a fix** for it.

[React-Pdf-Highlighter](#) **Forked the react-pdf-highlighter** repo and added functionality to **allow customizing pdf.js**, Mozilla's pdf reader (also used in firefox). Allowing people to combine **two incredibly powerful tools**, and **create imaginative apps**. Active Volunteer in [helping out community members](#).

PROJECTS

ReadSync A **React based web app** with express as the backend, and using postgresql. The web app also **uses Mozillas' pdfJS library** to serve as an **online pdf reader** that keeps user progress synced across all platforms. **(React, js, Nodejs, Express, PostgresQL)**

ShareStuff A react-native app designed to make the process of media sharing amongst friends and contacts easier. **(ReactNative, typescript, firebase sdk)**

navi-maze A game written in C meant to show my **algorithmic and mathematical skills**. This uses the **raylib engine**, which is a very **minimalistic game engine**, hiding away only platform details. All **functions and mathematical formulas are self-implemented**, and it has a good amount of unique and creative **optimizations to ensure performance** on systems like the raspberry pi. **(C, Raylib)**

SKILLS

Languages	HTML, CSS, Typescript, Javascript, Python, PostgreSQL, MariaDB, SQL, C++, C
Frameworks	React, React Native, Express, Node, Angular, Flask, Ionic
Libraries	Cypress, Pytest
Tools	Git, Bash, ssh, Linux, Gitlab CI, Docker, AWS, Heroku, Memcached

EDUCATION

LUMS - Senior Year
GPA: 3.01

IMPORTANT COURSES

Distributed Systems, Software Engineering, Data Structures, HCI, Program Analysis, Advanced Programming