AAYUSH OSTWAL

Senior Backend Engineer

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SUMMARY

A passionate Engineer with over **4 years** of experience in building and delivering **intuitive**, **scalable** products. My work encompasses a wide range of tools and frameworks, refined through experience in dynamic, fast-paced environments. I thrive in **collaborative** settings, fostering continuous growth through **mentorship**. Driven by a passion for impactful results, I focus on delivering user-friendly solutions that balance simplicity with functionality.

EXPERIENCE

Senior Backend Engineer   June'22-Present
Qure.ai
> Improved database CPU utilization from **50%** to **<20%** via analyzing SQL-explain plans, resolving MultiXact waits, and meticulous monitoring, saving more than **$16K annually**.
> Orchestrated an in-house application to serve translations with access control, **SSO login**, and interactive frontend (Vite.js) saving more than **$10K annually**.
> Uber coded **open-source Metabase** code with custom **i18n** configuration and APIs in clojure to support dashboard **internationalization** in more than 8 languages.
> Implemented Infrastructure as Code **(IaC)** using **AWS CDK** to standardize deployment infrastructure coupled with Jenkins CI/CD pipeline, managing over 50 servers in 7 regions in less than 10 mins.
> Designed **finite state machines** to automate multiple workflows to track patients & provide critical care.
> Developed & maintained several feature of qure's critical healthcare platform in Pyhton, Django, Javascript, Next.js with continuous improvement in user experience collaborating with Product & Design team.
> Engineered data synchronization solutions to seamlessly transfer data from **100+ on-premise** systems to cloud environments in real time.
> Provided **mentorship** to junior developer and took **interviews** of SRE and SDEs.

Data Scientist   June'21-June'22
HiLabs Inc
> Developed an **internal provider directory** by web-scraping U.S. doctor data from over **20 insurer websites**, utilizing Selenium, Python, and Tor Onion for seamless IP rotation.
> Accelerated report generation for over **1 million records**, reducing processing time from **2 days to just 3 hours** by leveraging PySpark, Hadoop clusters.
> Enhanced data quality by identifying and eliminating over **89,000 anomalous addresses** for the Georgia market, significantly improving the accuracy of final client reports.
> Led **20+ sales proof-of-concepts** (POCs), resulting in five successful agreements and one signed contract for a full-scale data validation initiative.

Data Scientist, Internship   Feb'21-May'21
HiLabs Inc
> Rewritten, optimized and organized more than 500+ SQL Queries to create datasets and dashboards.

Data Analyst, Internship   May'20-June'20
MateRate Education
> Constructed Agglomerative Clusters to identify different groups of students for Randomized Control Trials.
> Generated reports for all stakeholders from students' responses using HTML & Python automatically.

PROJECTS

Portfolio Website
> Developed a personal website in **Typescript** & **Vite.js** & deployed on GitHub Pages. [Github]

EDUCATION

Bachelors of Technology in Mechanical Engineering   June'17 - June'21
Indian Institute of Technology, Kanpur   7.9 CPI
Probability, Statistics, DSA, Time Series Analysis, Advanced Statistical methods for Business Analytics

EXTRACURRICULARS

Coordinator   2019-20
Dramatics Club, IIT Kanpur
> Organized Theater Activities & Competitions on the campus with a dedicated Team of **50+** members.
> **Collaborated** with Election Commission & Cell for Differently Abled for awareness & motivation.
> Significantly improved club performance at national level competitions from 1 to **7 wins** in 2019-20.

ACHIEVEMENTS

★ Value Champion Award
Awarded at Qure.ai in recognition of exceptional contributions and impact, showcasing my ability to drive results and deliver value.

🗄 Optimizations
Recovered 700GB+ disk space and maintained CPU < 20%.

✏ Technical Author
Recognized author in top publications on medium like Towards Data Science, Analytic Vidhya, Illumination, Nerd for Tech

☿ All India Ranks
AIR 943 in JEE Advance'17
AIR 697 in KVPY'17
AIR 1818 in JEE Mains'17
AIR 8 in NSTSE'16

SKILLS

</> Languages
Python, Javascript, Bash, SQL, Groovy, C++, Clojure, Scala, PySpark

⌁ Frameworks
Django, Celery, Bazel, Hadoop, React, Vite.JS, TypeScript

✿ Frameworks
Pandas, Numpy, Tensorflow, CV2, PyTorch

🗄 Databases
PostgreSQL, MySQL, Redis, H2

☁ Cloud Infrastructure
AWS: EC2, RDS, Lambda, Cloudwatch, Cloudfront, SQS, SNS, Cache, ASG, ELB

⚒ Tools
Jenkins, Dockers, Metabase, Grafana, Datadog, Keycloak (OAuth2), Git, Vercel, git-SPR, Firebase, Figma, JIRA

PUBLICATIONS

Towards Data Science
> Breaking Symmetry in Deep Learning
> 14 Data Visualization Plots of Seaborn

Analytics Vidhya
> The EDA Theoretical Guide
> The Art of Dimensionality Reduction

CERTIFICATIONS

> Neural Networks & Deep Learning
> Data Science | Intershala
> Feature Engineering | Kaggle