

Abhishek Udiya

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Education

National Institute of Technology Karnataka.

08/2021 - 07/2024

Masters of Computer Applications

University of Delhi.

08/2018 - 07/2021

Bachelors of Science in Electronics (Hons.)

Work Experience

Videonetics | *Senior Engineer* |

08/2024 - Present

- Contributed to a distributed image-processing system in Python with **gRPC**; optimized high response latency by applying **multithreading for I/O-bound tasks**, reducing latency by **40%**.
- Developed a **Redis-based job-tracking module**, enabling real-time task progress monitoring and improving throughput under high concurrency.
- Implemented **FastAPI** backend services to expose forensic functionality, ensuring modularity and seamless integration with the distributed system.
- Worked with **PostgreSQL** for managing **image-processing metadata** and optimized queries to handle high-volume transactional workloads.
- Applied design principles such as **Dependency Injection**, **Singleton** etc to improve scalability, maintainability, and overall system architecture.
- Collaborated with ML engineers to develop microservice for a **heatmap generation pipeline** as part of the distributed system for the company's product **Soterix**, targeting the US market.
- Contributed in deploying the **heatmap service to AWS ECS** using **Docker**, integrated **S3** for data storage, and contributed to infrastructure setup with **Terraform** (**private subnets**, **NAT gateways**, and **IAM policies**).

Karbon Business | *Software Engineer - Intern*

02/2024 - 08/2024

- Developed a **Django-based microservice** to generate **Business Resolution (BR) documents**, seamlessly handling complex features and edge cases using the **WeasyPrint** library.
- Designed an **automated data pipeline** to streamline **database migrations and data dumping**, improving **efficiency** and ensuring **data integrity**.
- Built and exposed **REST APIs** delivering insights on top merchants and sectors, with **Redis caching** to reduce response time and improve **system performance under load**.

Projects

Almabase - Connecting Alumni with Students | *HTML, CSS, JavaScript, Python, Django* | **GitHub**

05/2023

- A web application aimed at helping over 6000 students annually enhance their career opportunities through insights and resources shared by alumni.
- Developing onboarding capabilities to support over 2000 new students yearly, providing access to job postings, interview experiences, academic content, and comprehensive alumni information, empowering students' career journeys.
- Integrated email notification feature to improve user engagement with timely job posting notifications.
- Implemented Google authentication for seamless sign-in and enhanced account security.

Technical Skills

Languages: Python, JavaScript, Java Core, SQL

Skills: HTML, CSS, Django, Fastapi, Postgres, MongoDB, Node.js, React(Basic), Redis, Data Structure and Algorithms, Cloud: Docker, EC2, S3, RDS, VPC, ECS, CloudWatch, IAM, API Gateway, Terraform, Celery.

Core Subject: Operating System, Computer Network, Object-Oriented Programming (OOP), DBMS,

CERTIFICATIONS & ACHIEVEMENT

Problem Solving

NIMCET RANK AIR : 128 • Leetcode 500+ Problems (<https://leetcode.com/abhish0908/>)

Co-Curricular Activity

SPIE Student Chapter

09/2019 - 10/2019

Organizer & Member of SPIE Events

University of Delhi

- Led the planning and execution of a large-scale project exhibition for the SPIE Society of Optics and Photonics, showcasing 20+ projects and attracting 200+ attendees with positive feedback.
- Managed coordination, logistics, and team communication, ensuring the successful organization of the event within a 1-month deadline.