

CAREER SUMMARY

As a Data Engineer, I design and optimize data solutions using Oracle Fusion Data Intelligence (FDI) while automating workflows through Python. I have also developed fully functional web applications using React.js, TailwindCSS, Node.js, Express.js, MongoDB, PostgreSQL, AWS S3, Firebase, Kafka, Elasticsearch, and Docker; which builds over my professional experience and provides extra value to software development teams.

EXPERIENCE

Data Engineer - Deloitte US India

Full-Time

Bengaluru, India

Sep 2022 - Present

- Built an internal **Python** tool to help the team **compare and analyze large hierarchical datasets** from EDM and ERP systems with different formats (child parent vs level based). Engineered a **tree-diff algorithm** to reconstruct hierarchies, detect structural mismatches, rollup issues, and generate Excel reports — reducing hours of manual work to under a second and streamlining future comparisons.
- Automated a repetitive documentation task using **pyautogui**, enabling the team to extract relevant content from Oracle documentation and paste it into Excel for client-ready reports. Replaced a manual, tedious process with a reliable script, improving turnaround time and easing team workload during client engagements.
- Engineered a **Python** script to **automate OBIEE report modifications** by directly editing the underlying **XML** structure, eliminating the need for repetitive manual UI tasks (e.g., styling individual column headers). Reduced multi minute operations to seconds of execution, accelerating report customization in a legacy system.
- Developed a custom **JavaScript** utility to automate the selection of **1000s** of security assignments within a web interface lacking a "select all" option. Empowered the security team from repetitive manual clicks, delivering a significant productivity boost and streamlining a previously time-consuming process.
- Designed and implemented **data integration** processes using **Oracle Fusion Data Intelligence (FDI)**, modelling data from diverse sources (**terraform, ERP, EDM**) to create a unified semantic model for reporting.
- Applied **performance optimization** techniques to drastically reduce report/application **load times**, achieving improvements from **6 minutes** down to **8 seconds**.
- Consistently delivered high-quality technical solutions for diverse clients, earning **Applause** and **Outstanding Performance Awards**, and receiving a Special Shoutout in **Deloitte's Data Intelligence** newsletter.

PROJECTS

Video Streaming Infrastructure [Github](#)

- Architected and developed a modular **video streaming platform** replicating YouTube's high-level design, leveraging a comprehensive microservices architecture for scalability and resilience. Core services implemented:
  - Authentication Service**: Managed user signup, login, and logout with **JWT** authentication, backed by **Node.js, Express.js, and PostgreSQL**.
  - Upload Service**: Handled secure **AWS S3** presigned URL generation, pushed video metadata to **Kafka** for further processing, built with Node.js, Express.js, and PostgreSQL.
  - Video Processing Service**: Developed in **Python** with **FFmpeg**, consumed Kafka messages to **transcode** videos into multiple **resolutions**, uploaded processed content to **S3**, updating PostgreSQL with versions.
  - Video Search Indexing Service**: Maintain a real time **search index** using **Elasticsearch**.
  - Search Service**: Processed user queries to deliver relevant video results from the **Elasticsearch** index.
- Orchestrated deployment using **Docker** and **Docker Compose** for environment management and portability.
- Configured **NGINX** as an **API Gateway** for request routing and **load balancing** across microservices.
- Developed a responsive frontend using **React.js, Tailwind CSS, and shadcn/ui**, providing seamless video browsing, search, and upload functionalities.

Daoist Dialogue [Live](#) - [Github](#)

- Engineered a **real time chat** application inspired by Xianxia lore, enabling engaging discussions within dynamic, multi user chat rooms.
- Developed a modern and responsive frontend using **React.js, TypeScript, Tailwind CSS, and shadcn/ui**, ensuring a sleek and intuitive user experience.
- Implemented a **Node.js** and **Express.js** backend with **Socket.io** for seamless real-time and online status updates. Integrated **MongoDB** for efficient persistence of messages and chatroom details. Secured user sessions and managed authentication through **JSON Web Tokens (JWT)**.

SKILLS

Programming:	Python, Javascript, Typescript, Go
Frameworks & Libraries:	Node.js, Express.js, React.js, React Router, TailwindCSS, shadcn/ui, FastAPI
Databases/Cloud:	MongoDB, PostgreSQL, Kafka, Elastisearch, AWS, Firebase, Oracle ADW
Tools/Others:	Docker, Git, CI/CD, Vite, Postman, Linux, neovim (BTW)

EDUCATION

Bachelor of Technology	2018 - 2022
Minors in Computer Science	9.25 CGPA
Vellore Institute of Technology (VIT)	Vellore, India