

KUSH KOTHARI

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Education

Veermata Jijabai Technological Institute

2019 – 2023

Bachelor of Technology in Computer Engineering

India

Experience

Deutsche Bank (DWS Asset Management) 📄

July 2023 – Present

Senior Analyst

Pune, India

- Tech Stack: Typescript/Javascript, React, Java, Spring, GCP, Docker
- **Boosted trader efficiency by 10x** by developing a real-time WebSocket dashboard that aggregated multi-source equity lending data, featuring **fuzzy search, dynamic filtering, and high-frequency updates**
- Built and optimized both frontend and backend components for a data-intensive asset management platform, improving scalability with **database query optimizations, frontend caching (25% load time reduction), and Higher-Order Components (HOCs)** for UI modularity and reusability.
- **Saved the company \$20,000 in licensing fees annually** by creating a REST API-based trade booking workflow and automating BVI-file trade processing, which **replaced a costly robot automation framework**.
- Collaborated with designers and stakeholders in an Agile environment using JIRA and Figma, iterating rapidly based on trader feedback. Actively contributed to code reviews and mentoring, and conducted **internal trainings on React Internals, Frontend Best Practices, and Docker**.

Google Summer of Code 2022, CERN-HSF 📄

July 2022 – Sep 2022

Open Source Contributor

- Tech Stack: Python, Dask
- Contributed to Uproot, a Python library for streaming high-energy physics data from ROOT files.
- Built uproot.dask, integrating Uproot's data streaming with Dask's parallel computing, enabling researchers to **process large-scale datasets efficiently across distributed clusters and low-memory environments like laptops**.
- **Optimized Dask computation graphs**, reducing **workflow execution times by 40%** and **memory overhead from multiple GBs to just 250-500MB** on standard laptops.
- Implemented **multi-backend support**, integrating NumPy, Awkward Array, and DataFrame pipelines, allowing high-energy physics researchers to work with ROOT file data in their preferred formats effortlessly.
- **Benchmarked 5+ execution modes** across single-core, multi-threaded, and distributed clusters, ensuring scalability for high-energy physics workflows.

Google Summer of Code 2021, NumFOCUS 📄

May 2021 – Aug 2021

Open Source Contributor

- Tech Stack: Python, Django, PostgreSQL, Linux
- Built a **spatial data download and installation pipeline** for Data Retriever, **enabling seamless integration of 50+ vector and raster datasets into PostgreSQL with PostGIS**.
- Automated health checks, **reducing database installation failures by 30%** and allowing users to debug errors.
- **Cut manual setup time by 50%** by designing an automated testing pipeline for **Linux servers using cron jobs**.
- Contributed **18 new spatial dataset testing scripts**, along with a **modular framework** to support **scalable dataset additions**.

Technical Skills

Frontend Technologies: React.js, Typescript / Javascript

Cloud Technologies: Google Cloud Platform

Backend Technologies: Java (Spring Boot), Python, SQL

Dev Technologies: Git, Linux, Bash, Docker

Projects

twAIn | *Python, NLP, Flask, Web Design, SCSS*

July 2020

- Built an AI-powered interactive storytelling platform, serving as a dynamic Dungeons & Dragons (DnD) campaign generator, creating narratives based on user-defined prompts, genre, and length.
- Developed and integrated a React-based frontend with a Python Flask backend to handle AI model inference.
- Designed an intuitive UI with interactive story progression, enabling customizable character arcs and genre-based storytelling.

Certifications

Google Cloud Professional Data Engineer Certification 📄

Jan 2024