

Harshit Singhai

SOFTWARE ENGINEER

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Work Experience

Deloitte USI

Gurugram, India

DATA ENGINEER - STRATEGY AND ANALYTICS - ARTIFICIAL INTELLIGENCE AND DATA ENGINEERING

Feb. 2022 - Ongoing

- Collaborated with a leading US asset management firm's internal audit team to architect cloud analytics on AWS for proactive risk detection
- Developed a RAG app with **AWS Bedrock** LLM, integrating data ingestion, embeddings, and vector store for fast, accurate content retrieval
- Optimized FastAPI and PostgreSQL performance, reducing latency by **40%** and improving response times by **35%**, enhancing user satisfaction
- Eliminated inter-job dependency failures and mismanaged cron jobs by orchestrating cross-account data pipelines with AWS Step Functions
- Architected secure **PII infrastructure** with masking and segregated storage, enhancing compliance, saving **\$50k/year in potential fines**
- Saved **52 man-hours** per week by migrating auditor reporting to AWS, automating tasks, and eliminating the need for running scripts manually
- Improved data availability with robust pipelines, achieving **99.8% uptime** and efficient ingestion from 7+ data streams with Glue and Lambda
- Implemented Spark pipelines with broadcast joins and partitioning, achieving **4x** throughput increase and reducing processing time by **60%**
- Migrated legacy data systems to AWS cloud, leveraging ECS, S3, and RDS, reducing infrastructure costs by **25%** and improving system scalability
- Reduced cost by **40%** using S3 Intelligent Tiering, replacing EMR with Glue autoscaling, S3 lifecycle policies, and Athena query optimization
- Implemented Glue data quality rules: automate trend checks and anomaly alerts, ensuring consistent and reliable data for governance
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Quantive

Indore, India

SOFTWARE ENGINEER - PLATFORM

Aug. 2021 - January 2022

- Built microservices pipelines for data transformation and aggregation, enabling real-time anomaly detection and OKR performance analysis
- Optimized microservices leading to **30% reduction** in memory usage & processing time through memory profiling & improved code readability
- Augmented microservice built on Pandas, using efficient vectorized operations to deliver KPI insights **20% faster** than prior batch processes
- Increased data throughput by **40%** using Python Celery **producer-consumer architecture** for async processing, and ClickHouse for storage
- Implemented multi-channel anomaly detection alerts via Slack and email, reducing clients' average response time to critical issues by **10%**

Deepsource

Bengaluru, India

SOFTWARE ENGINEER - MACHINE LEARNING

December 2020 - June 2021

- Developed a recommendation system using XGBoost regression to rank code issues by likelihood of being resolved based on historical patterns
- Created 20k+ personalized ML models, one for each repository, to predict high-impact code issues, saving developers 10 hours/week
- Built adaptive ML retraining pipelines to prevent model decay, updating ML model only when new data improved precision and relevance

Projects

- fictionally-irrelevant.vercel.app/posts/side-projects-2023: Shipped and deployed **20+** user-facing side projects, reaching over **1k users** globally
- <https://fictionally-irrelevant.vercel.app> : **Authored 72+** in-depth technical blog posts, delving into diverse areas like **AI, Cloud, Data, and web3**
- **MLH Fellowship**: Selected among the top **144** out of 30,000 applicants; contributed to **BentoML** open-source Python project

Accomplishments & Awards

2023 **Cohort Lead**, Deloitte AI Academy Explorer Program: Guided 80+ practitioners on Datacamp ML track

Deloitte USI

2022 **Applause Award**, recognized by Senior Leadership for delivering outstanding client outcomes

Deloitte USI

2019 **Mentored**, sophomore students for Python: Conducted and managed 30+ labs sessions and tutorials

Bennett University

2019 **National Finalist**, Smart India Hackathon: Enhanced Kotak Mahindra Bank's virtual assistant Keya

SIH

Education

Bennett University

Delhi NCR, India

BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING (CSE) - 7.98 GPA

Aug. 2016 - Aug. 2020

- Main coursework: **Data Structures and Algorithms, Artificial Intelligence, Machine Learning, Cloud Computing, Big Data**

Programming Skills

Server Side	Python, Go, Node.js, FastAPI, Django, REST API
Data Engineering	Spark, PySpark, Pandas, Airflow, AWS Glue, S3, EMR, Athena, Hive, Presto, SQL
Machine Learning	Scikit-Learn, LLM models (OpenAI, Llama 3.2), LangChain, AWS Bedrock, Sagemaker, Keras, GenAI, Deep Learning, MLOps
Database	SQL/NoSQL, PostgreSQL, MongoDB, AWS DynamoDB, Redis
Other	AWS, Docker, Kubernetes, Git, Problem Solving, Data Structures Algorithms