Prathik Bharath Jain

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SUMMARY

Machine Learning Engineer with experience in building production-grade ML systems, deep learning pipelines, and MLOps workflows. Skilled in computer vision, NLP, forecasting, and model deployment using modern cloud and orchestration tools. Experienced collaborating with engineering teams to bring ML models from research to scalable production environments.

TECHNICAL SKILLS

Languages: Java, Python, Scala, SQL, C, JavaScript, Go, HTML, CSS, React

Backend: Spring Boot, REST APIs, gRPC, Microservices, PostgreSQL, MySQL, Redis

Cloud & Infra: AWS (S3, lambda, EC2, Redshift), Docker, Kubernetes, Git, GitLab, CI/CD

Distributed Systems and tools: Kafka Cassandra, Spark, Airflow, Hadoop ecosystem, Swagger, Open AI, Terraform (basics)

EXPERIENCE

Data Scientist | Atkins Realis | Denver, CO, USA   **July 2025 - Present**
- Developing an ML model to predict water pipeline bursts using feature engineering to reduce failures and disruptions.
- Built a Power BI dashboard to monitor grant applications across pre- and post-award workflows, integrating multiple data sources and automating refresh schedules.

Machine Learning Engineer | Gil's Lab | Boulder, CO, USA   **September 2023 - May 2024**
- Built an end-to-end computer vision pipeline using YOLOv8 and Bot-SORT for small-object fish detection and tracking, achieving 93.87% accuracy and enabling automated behavioral analytics.

Data Engineer Intern | Lincoln Electric | Cleveland, OH, USA   **May 2024 - May 2025**
- Built 75+ data pipelines in **Azure Data Factory** using Azure data bricks, and medallion architecture to transform and migrate data for **Power BI**, facilitating business intelligence and creating **SQL scripts** for ad-hoc requests.
- Extracting tables from **SAP** tables using OData connectors and SAP table connectors to the Azure Synapse environment building the **Data warehouse** environment and scheduling update pipelines in Azure Synapse Analytics.
- Transcribed Oracle **stored procedures** and scripts into SQL Server and migrated data flows from **Alteryx** to Azure.
- Developed a comprehensive dashboard for tracking log metrics in real-time; this initiative empowered teams with actionable insights by reducing troubleshooting time by 60% during critical operational periods.

Software Engineer | Zee Entertainment Ltd | Bangalore, India   **January 2022 - July 2023**
- Engineered Spring Boot microservices for a new Juspay payment integration, transitioning 95% of payment traffic without service disruption.
- Engineered a third-party Apple payment token verification service with an in-house module, reducing API latency by 92%.
- Designed backend API contracts and implemented asynchronous communication using Kafka, increasing transaction success rates and contributing to $2.5M annual revenue lift.
- Built a generic server-to-server asynchronous notification system using AWS + Kafka, reducing cloud cost and simplifying monitoring across 5 payment providers. Resolved 100+ critical production issues

PROJECT

Sales Forecasting MLOps Platform | Python, Airflow, MLflow, Docker, Minio
- Built a **production-grade MLOps pipeline** using Astronomer/Airflow to orchestrate data validation, feature engineering, model training, experiment tracking, and artifact storage for forecasting.
- Implemented an ensemble forecasting system (XGBoost, Prophet) with Optuna optimization, achieving low MAPE, comprehensive diagnostics through automated visualization and MLflow-tracked metrics.

SQL RAG - LLM Powered SQL Query | Python, LLM, RAG, Streamlit, SQLite, REST API
- Developed a Streamlit web app that converts natural language into SQL queries using a local LLM with Retrieval-Augmented Generation (RAG) over schema metadata, improving query accuracy on complex joins.
- Automated table creation, data insertion, and real-time query execution on SQLite, streamlining data retrieval and manipulation.

Eye-Move Assistive typing System | Python, CNN, NLP, TensorFlow, AWS
- Developed CNN-based gaze-tracking model enabling on-screen text input for impaired users, improving accessibility.
- Enhanced typing efficiency using NLP-driven text prediction, with n-gram models, reducing keystrokes and accelerating communication speed
- Published research paper on Eye Gaze typing in IEEE (https://ieeexplore.ieee.org/document/9792928)

EDUCATION

Master of Science in Data Science - University of Colorado Boulder, USA	CGPA: 3.9/4.0	**August 2023 - May 2025**
Bachelor of Technology in Computer Science - PES University, India	CGPA: 8.4/10	**August 2018 - June 2022**