BHASKAR JYOTI SAIKIA

DATA SCIENCE | MACHINE LEARNING | SOFTWARE ENGINEER

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PROFESSIONAL SUMMARY

Experienced Lead Machine Learning Engineer with 10+ years of success in designing and deploying **AI/ML systems**, **MLOps pipelines**, and **agentic workflows** across banking, media, and energy sectors. Specialist in **Generative AI**, **LLMs**, **RAG**, and **LangGraph/LangChain**, with production-grade experience on **Databricks**, **Kubernetes**, and cloud platforms including **GCP** and **AWS**. Strong in CI/CD, model lifecycle management, and stakeholder engagement

WORK HISTORY

LEAD MACHINE LEARNING ENGINEER | 02/2024 – Current — NBC UNIVERSAL, LONDON

- **First hire in Europe** to **lead and establish the Machine Learning and AI team**, responsible for driving the adoption of **Generative AI** and **agentic systems** across the business.
- Led the design and deployment of **AI solutions** for a global media company, using **LLMs** (e.g. **GPT-4, BERT**, **Gemini**, **LLAMA**) to **automate content summarisation**, **generate SQL queries**, and **retrieve database schema** insights via **autonomous agents**—capabilities directly relevant to enterprise data interrogation and decision support.
- Built **agentic AI workflows** with **LangGraph** and **LangChain**, enabling dynamic, multi-step reasoning for tasks such as **data exploration**, **search**, and **analysis with Retrieval-Augmented Generation (RAG)** pipelines to enhance contextual understanding of media content and metadata, enabling accurate, real-time responses.
- Deployed **LLM agents** on scalable infrastructure (**GCP Vertex AI**, **Kubernetes**), supporting high availability and efficient resource usage in production.
- Delivered full **MLOps** lifecycle support—from **architecture** and **development** to **monitoring**—using cloud-native and agnostic tools.
- Built real-time streaming platforms using **Apache Kafka** and **Google Pub/Sub** for large-scale impression data processing.
- Integrated ML/AI models into **observability systems** (Prometheus, Grafana, Kibana), enabling predictive alerting and anomaly detection.
- Implemented **serverless solutions** using **Google Cloud Functions** and **AWS Lambda** for lightweight, **event-driven AI services**.
- Collaborated with **Data Scientists** and **Platform Engineers** to ensure robust, production-ready deployment of both **traditional and generative models**

LEAD MACHINE LEARNING ENGINEER | 05/2022 - 02/2024 — ACCENTURE, LONDON

- Led delivery of AI initiatives **for financial services** clients, including global banks, with a focus on **generative models**, real-time insights, and **knowledge graph** integration for secure, insight-driven applications.
- Deployed **LLMs** (including fine-tuned Llama -based models) for enterprise data interrogation and insights generation using **RAG** and **prompt engineering**.
- Developed and implemented end-to-end **MLOps** workflows on AWS, GCP using **Kubeflow and Kubernetes**, supporting both traditional ML and GenAI capabilities across domains.
- Built real-time streaming and analytics pipelines (**Kafka, Pub/Sub**) to power event-driven AI systems across business functions.
- Published a globally recognised **MLOps** whitepaper, demonstrating thought leadership and deep domain knowledge across Generative AI, **LLMOps**, and operational scalability.
- Frequently engaged with stakeholders to identify **business** needs and deliver tailored **AI solutions** with measurable outcomes—experience directly applicable to stakeholder collaboration at Partners Capital.
- Developed **predictive models** and **machine learning** algorithms to solve complex business problems such as **product recommendations** and drive data-driven decision- making for many **banking clients**.
- Utilised **deep learning models** for **financial transactional data** to extract valuable insights **from knowledge graphs**, enhancing data-driven decision-making.
- Productionized machine learning models in various cloud environments, including **GCP Vertex AI and AWS Sagemaker**, enhancing efficiency through caching strategies **Docker** and **Kubernetes**.
- Implemented **CI/CD** pipelines using **Jenkins** and **Airflow**.

SENIOR MACHINE LEARNING ENGINEER | 09/2019 - 05/2022 — QUANTEXA, LONDON

- **One of the early Machine Learning Engineer hires**, contributing to the **foundation and growth of ML capabilities** within the company, particularly in solutions for the **financial services sector**.
- Developed and deployed machine learning models and data pipelines for **fraud detection**, **Anti money laundering** and intelligence within the **financial services** industry using **knowledge graphs.**
- Created production-grade ETL and ML services using **Kubernetes, Docker,** and **CI/CD** best practices.
- Collaborated with clients and stakeholders to gather requirements, define use cases, and deliver impactful AI-driven solutions.
- Developed applications and visualised performance metrics through tools like **Grafana**, ensuring model transparency and reliability post-deployment.
- Contributed to the broader adoption of AI within client organisations through demos, **knowledge sharing**, and use-case discovery workshops.

DATA SCIENTIST | 09/2018 - 07/2019 — ACADEMIC PROJECT QMUL, LONDON

- Developed a **real-time face detection system** using **deep learning** and **TensorFlow**, deployed on a **drone platform** and integrated with **mobile applications**.
- Built and trained a **convolutional neural network (CNN)** model for **face detection** and **image prediction**, optimised for deployment on edge devices.
- Deployed the model in **cloud environments** including **AWS** and **Google Cloud Platform (GCP)** for scalable, real-time inference.
- Led a **stock market analytics project**, analysing historical data and predicting price trends for **AAPL** and **GOOGL** stocks.
- Utilised **Yahoo Finance API** and implemented an **LSTM model** using **Keras** with the **Adam optimiser**, combined with **sentiment analysis** to improve prediction accuracy.

SOFTWARE DEVELOPER | 01/2018 - 08/2018 — EDELWEISS, MUMBAI

- Designed and implemented **data models and schemas** to detect **fraudulent banking transactions** and **credit card abuse**.
- Supported **statistical data analysis** and contributed to optimising **information flow architectures**.
- Contributed to the development of **API-driven software**, focusing on **scalability**, **modular architecture**, and **maintainability**.
- Managed the **end-to-end software development lifecycle**, from initial design through to deployment.
- Conducted **code reviews** and enforced coding best practices to maintain high software quality standards.

SOFTWARE DEVELOPER | 06/2015 - 01/2018 — ATOS, MUMBAI

- Developed **backend systems in Java** and **frontend features using JavaScript**, delivering scalable enterprise applications.
- Designed and maintained **relational database schemas** for **banking fraud detection systems**, improving fraud response workflows.
- Created and optimised **SQL database objects** including **tables**, **views**, and **materialised views** to support analytics use cases.
- Wrote **clean, well-tested, and maintainable code** for business-critical software systems.
- Designed and implemented **RESTful APIs** and **microservices**, enabling efficient data exchange and integration across distributed systems.

SKILLS

Financial Services Experience: Worked with major UK banking clients and FS-focused AI application

Generative AI & LLMs: GPT-4, Gemini, LLaMA, RAG, Prompt Engineering, Fine-tuning

Agentic AI: LangGraph, LangChain, AutoGen, OpenAI Agents

AI/ML Frameworks: PyTorch, TensorFlow, Scikit-learn, Keras

MLOps & DevOps: Kubernetes, Docker, CI/CD, Airflow, Vertex AI, AWS Sagemaker

Cloud & Serverless: GCP, AWS, Google Cloud Functions, AWS Lambda

Data Engineering: Kafka, Pub/Sub, ETL pipelines, model monitoring

Communication: Proven ability to bridge the technical-business gap and influence decisions at all levels

Backend: Python, Flask, TDD, Kafka

Version Control: Git, SVN

Database: Elasticsearch, MySQL, MongoDB, Oracle SQL, PostgreSQL

EDUCATION

Master of Science, Data Science, 2019
Queen Mary, University of London - UK

Bachelor of Science, Computer Science, 2015
Sharda University