TEJAS SATISH NAVALKHE

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Work Authorisation: Graduate (PSW) Visa (Eligible to work full-time in the UK)

Professional Summary

Innovative **AI Engineer** with **3+ years** of experience in designing and deploying **AI/ML solutions** for fintech, edtech, transportation and mobility industry. Proficient in **deep learning, NLP, reinforcement learning, and generative AI**, with hands-on experience in **model development, MLOps, and real-time data pipelines**. Skilled in leveraging frameworks like **PyTorch, TensorFlow, and Hugging Face** to build scalable AI systems. Strong expertise in **algorithmic trading systems, software development,** and **big data technologies (Spark, Kafka, Hadoop).** Experienced in building **low-latency trading algorithms, dynamic pricing models,** and **automated ETL pipelines** to drive business insights and improve system performance**.** Passionate about solving complex problems using AI and driving business innovation through cutting-edge technology.

Professional Experience

Data Scientist
Co Wheels Car Club

05/2024 – 11/2024
Newcastle, United Kingdom

Tools / Technologies: Python, Spark, Databricks, Dynamic Pricing, Machine Learning, Hadoop, SQL

- Built a **deep learning-based dynamic pricing model** using **LSTM networks,** analysing **5+ years of booking data** of 30,000+ users to boost revenue by 19%.
- Implemented **real-time demand forecasting** with **Kafka and PySpark**, enabling **automated pricing adjustments**.
- Conducted **hyperparameter tuning** using **Optuna,** achieving **92% accuracy** in demand prediction.
- Collaborated with **cross-functional teams** to deliver insights that informed strategic business decisions and operational enhancements, utilising **effective communication and collaboration skills**.

Quantitative Developer (Big Data - AI)
Finvestox.com

02/2023 – 04/2024
Remote, India

Tools / Technologies: AWS, Redis, Selenium, Apache Spark, Automated ETL pipelines, Automated Testing

- Created a dynamic website with **interactive financial charts** powered by Plotly, incorporating indicators such as RSI, MACD, and trade signals for **real-time big data visualisation**. This enhanced user engagement and improved **analytics accuracy by 25%**.
- Engineered a **secure admin panel** for client management and algorithmic trading access, incorporating **automated data pipelines** with **Airflow and Spark**, cron jobs, and alerting mechanisms. Implemented an auto-recovery system, ensuring **99.9% uptime** and **reducing administrative overhead by 25%.**
- Designed an algorithmic trading system deployed on a **Linux server**, enabling **sub-millisecond trade execution**, **increasing trading volume by 20%** with a **low-latency multi-server architecture**.
- Leveraged **Redis for real-time pricing data** and **ETL pipeline for historical data**, improving **retrieval speed by 35%** and ensuring **high availability of data** for trading decisions.
- **Automated broker authentication using** selenium **and** trade execution workflows**, enhancing system scalability and** improving execution speed by 50%.

Software Engineer
TEJEarning

07/2021 – 02/2023
Jalgaon, India

Tools / Technologies: Python, Flask, Selenium, Pandas, AWS, WebSocket, API, Linux, Cron jobs, SQL, Apache Spark

- Developed **automated trading** features like risk management and auto-buy/sell, increasing **ROI by 10%** through more efficient trading.
- Created scripts for **real-time big data analysis** and leveraged **Websockets and Spark Streaming** for faster and secure data access from brokers, improving trading accuracy and profitability.
- Integrated APIs from multiple brokers like AngelOne, Zerodha with automated **Selenium-based testing**, enabling seamless investing across platforms and enhancing operational efficiency.
- Designed and tested **large-scale data processing workflows**, ensuring optimal **data storage, indexing, and retrieval**.
- Deployed client systems on AWS and used forecasting algorithms, ensuring **99.9% uptime**.

Education

Master of Science in Data Science (With Specialisation in Artificial Intelligence)
Newcastle University, Newcastle Upon Tyne, United Kingdom

09/2023 – 08/2024
Grade: Distinction

Relevant Coursework: Exploratory Data Analysis (EDA), Statistics for Data Science, Big Data Technology, Machine Learning, Deep Learning, Image Informatics, Data Management.

Projects:

1. **Performance Optimisation of Large-Scale Data Processing**: Optimised data pipelines using **Databricks** and **PySpark**.
2. **Time Series Student Engagement Prediction:** Developed an LSTM-based model with **ReLU activation** and **Adam optimizer.**

Bachelor of Technology in Computer Science Engineering   08/2019 – 07/2023

Prestige Institute of Engineering Management & Research, Indore, India   **CGPA (8.78/10)**

Relevant Coursework: Data Structure & Algorithm, Software Engineering, Project Management, Machine Learning, Database Management Systems, Computer Networks, Cloud Computing.

Projects:

1. **Transfer Village**: Built a large file sharing web application using **Amazon S3** and **EC2**.
2. **The Virtual Assistance**: Developed a speech recognition system using **Google Speech Recognition** and **SQL**.

Projects

Fine-Grained Aircraft Model Classification   11/2023 – 12/2023

- Built a **scalable image classification pipeline** using **Databricks** and **Apache Spark**, achieving **70% accuracy.**
- Conducted **distributed model training** and hyperparameter tuning to optimise performance.

Identifying Customer Satisfaction within the Airline Industry using Sentiment Analysis   11/2023 – 12/2023

- The goal was to identify customer satisfaction in the airline industry by **analysing large-scale Twitter data**, helping airlines improve customer experience and service strategies.
- Processed **large-scale Twitter data** using **Apache Spark**, achieving an optimised **77.34% accuracy** in sentiment classification.

Attendive – AI-Driven Face Recognition Attendance System   07/2022 – 11/2022

- Developed an **automated attendance system** using **OpenCV, Spark ML**, reducing manual effort by **70%.**
- Achieved an impressive **99.38% accuracy rate** by utilised **Amazon S3** for large-scale storage.

Technical Skills

Programming Languages: Python, R, Scala, JavaScript, C++
Big Data: Sqoop, Hive, Apache Spark, Snowflake, Databricks
Databases: SQL, MySQL, PostgreSQL, MongoDB, Cassandra, Redis Pub/Sub
Data Visualisation: Power-BI, Plotly, Seaborn, KPI Reporting
MLOps: Docker, Kubernetes, MLflow, Kubeflow, Airflow, AWS SageMaker
Data Engineering and Cloud: AWS, Azure, ETL Pipeline, Data Lakes, Hadoop, Apache Kafka, AWS Glue
Data Science & Machine Learning/Deep Learning: Pandas, NumPy, TensorFlow, Keras, PyTorch, and Scikit-learn
Testing & Automation: Selenium, Pytest, A/B Testing, Unit Testing, Performance Testing
Server-side Scripting: Linux, Unix, Apache2
IDE: Visual Studio Code, IntelliJ, Jupyter, Google Colab, Eclipse
Web Development & API: Flask, Django, WebSocket, RESTful API
Project Management: Jira, Monday, Asana, Git
Project Documentation: Jupyter Notebook, Latex, RMarkdown, Project Template
Industry Skills: Stakeholder Management, Mentoring, Consulting, Freelancing and Business Development

Certifications

Machine Learning with Scikit-Learn	Madecraft | 08/2024
Data Science & Advance Machine Learning using Python	Grras Solutions | 01/2022
Data Science Foundations	IBM | 06/2021

Awards

- **NCL+ Award** by Newcastle University   05/2024
- **Best Student of the Batch (2019-2023) Award** by Prestige Institute of Engineering Management & Research   04/2023

Publications

- **'MATHABILITY LEVEL 1: A MATHEMATICS FOUNDATION COURSE'** Book, Amazon.in, Feb. 2024, ISBN: 978-93 340-0806-7
- **'Design and Development of Smart Virtual Assistant Using Latest Tools and Technologies'**, International Journal of Core Engineering & Management