Sahil Pansare

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**Education**

**University of Bath Bath, England**

*Master of Science in Data Science* *Graduated 2024*

* **GPA:** Merit
* **Honors:** Dean’s Award for Academic Excellence Scholarship
* **Thesis:** *RadarGrasp* - Developed an end-to-end radar-based framework using FMCW radar for human grasp classification and prediction with models like Temporal CNN and CNN-LSTM.
* **Relevant Coursework:** Applied Data Science, Machine Learning, Reinforcement Learning, Bayesian Machine Learning, Advanced Statistics

**Symbiosis Skills and Professional University Pune, India**

*Bachelor of Science in Data Science*  *Graduated 2022*

* **GPA:** 9.14/10
* **Honors:** Winner of Smart India Hackathon 2020 – Software Edition (World’s Largest Hackathon)
* **Relevant Coursework:** Python Programming, Machine Learning, Deep Learning, Artificial Intelligence, Probability and Statistics, Linear Algebra and Calculus, Data Mining and Warehousing, Big Data Technologies with Hadoop.

**Work Experience**

**Ernst & Young LLP Gurgaon, India**

*Data Scientist, Government and Public Sector* *Feb’22 – May’23*

* Delivered time series price forecasting solutions for the State Government Agriculture Department using **LSTM** and **ARIMA**, retaining a **£600,000** client project and increasing forecasting accuracy (based on **MAPE)** from **72% to 96%.**
* Deployed **Computer Vision** models for MENA's largest power supplier, employing advanced machine learning techniques for **Object Detectio**n and **Anomaly Detection**, resulting in enhanced operational efficiency and cost savings.
* Developed an **NLP** **chatbot** for utility sector customer support using **LLaMA**, Flask, and Docker, reducing customer query resolution time by 40%.
* Built an **RAG** system using **LLaMA**, Langchain, and **Chroma DB** for public health research retrieval, reducing research time during crisis situations.
* Designed a real-time defect detection system in manufacturing using **YOLOv5**, increasing QA efficiency and reducing defects.
* Created interactive **Dash/Plotly** dashboards for real-time log data insights at the National Data Centre for India, improving incident resolution times. Integrated an ML model for **anomaly detection**, enabling the automatic flagging of potential cyber threats, enhancing security monitoring efficiency.

**Enerdatics** **Bangalore, India**

*Data Scientist* *Apr’21 – Dec’21*

* Built renewable energy consumption models, improving predictive accuracy by 20%, optimizing resource allocation for clients.
* Designed an **NLP pipeline** to classify and extract key entities from industry reports, reducing data transformation time by 2x.
* Conducted web scraping to compile M&A data in the renewable energy sector, producing insights that directly supported £4M worth of investments.

**Smart India Hackathon Gujrat, India**

*Team Leader, Tyche Jul’20 – Feb’21*

* Led a team to develop “Smart Navigation and Environmental Analysis for Efficient Fuel Consumption,” an IoT-based solution for the Ministry of Petroleum and Natural Gas integrating both hardware and software components.
* Software Components (Android Application): Enabled seamless navigation, on-route fuel station recommendations, and low-fuel alerts, reducing travel inefficiencies.
* Hardware Components: Integrated fuel level sensors, Raspberry Pi 4, A/D Converter, and Bluetooth module for real-time data transfer, improving fuel monitoring accuracy.
* IoT Integration: Cloud-based data storage enabled analysis of driving patterns.

**Projects**

* **LLM** based **WAF logs** threat detection and classification:
  + Utilizedopen source **LLMs** to build an end-to-end WAF logs *threat detection* and *classification* application.
  + Implemented a pipeline for processing and analyzing web request logs, detecting potential security threats, and classifying attack types using NLP techniques.
  + **Tech Stack:** Python, **BERT**, **Langchain**, **HuggingFace**, Postgres, Streamlit, Apache Superset
* **Restaurant AI:** 
  + Developed an AI-driven app that recommends dish pairings based on user preferences, tasting notes, and mood settings.
  + Utilized NLP techniques to analyze ingredient profiles and suggest complementary dishes dynamically.
  + Designed an intuitive interface with a modern UI for users to explore personalized meal combinations, enhancing dining experiences.
  + **Tech Stack:** OpenAI, React, Tailwind CSS

**Skills**

**Technical Skills:**

* **Programming:** Python, SQL, R
* **Machine Learning Frameworks:** TensorFlow, PyTorch, scikit-learn.
* **Data Visualization:** Tableau, Microsoft Power BI, Matplotlib, Dash, Plotly
* **Specialized Skills:** Time Series Analysis, Natural Language Processing, Computer Vision, Bayesian Inference, Reinforcement Learning
* **Databases:** PostgreSQL, MongoDB, Chroma DB
* **Tools & Libraries:** Langchain, HuggingFace, Pandas, NumPy
* **Cloud Technologies:** AWS, Azure
* **AI Tools:** OpenAI (GPT4, Whisper), Google Gemini, Cursor, GitHub Copilot

**Certifications**:

* DeepLearning.AI — Machine Learning in Production (2024)
* DeepLearning.AI - TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning (2023)
* Microsoft Power BI Desktop for Business Intelligence (2022)
* Agile PM 201: Understanding Agile at Deeper Level (2022)