PRANAVA KAILASH SUBRAMANIAM PREMA

Machine Learning Engineer | Python | Cloud Deployment
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Summary

Machine Learning Engineer passionate about designing and deploying intelligent, data-driven applications. Skilled in Python, TensorFlow, and SQL with hands-on experience building ML pipelines, deploying APIs in cloud environments, and integrating LLM-based automation tools. Adept at translating research into scalable software that improves efficiency, usability, and decision-making. **NO SPONSORSHIP REQUIRED UNTIL APRIL 2027**

Skills

Programming, ML & Frameworks: Python | SQL | JavaScript | OOP | scikit-learn | PyTorch | TensorFlow | Transformers | LLMs | FastAPI | Flask | Version Control (Git/Github)

AI & Analytics: Machine Learning Lifecycle | Model Training & Validation | Data Pre-processing | Bias & Class Balance Handling | Feature Engineering | Predictive Analytics | Cloud Deployment | Statistical Modelling

Achievements and Projects

- Created and published Prompt Enhancer extension integrating Google's **Gemini Nano AI**, enabling **real-time prompt optimization** with **100% local processing**, low latency, and **complete data privacy**
- Designed and deployed CyNER 2.0, an **LLM-based NLP model** that automatically extracted entities from unstructured **cybersecurity text, enhancing data accuracy** and **retrieval reliability**
- Built and deployed **cloud-based APIs** on **AWS (**EC2, Glue and Lambda**)** and **Google Cloud** (*Compute Engine*) to support **real-time analysis** and **Monte Carlo simulations** to enable real-time, data-driven trading decisions
- Developed **Python + SQL ETL pipelines** for **compliance** and **risk datasets**, reducing processing time by **50%** and improving pipeline reliability for analytics

Education

University of Surrey, MSc in Data Science (*Merit*)   Feb 2024 – Feb 2025
- Modules: Machine Learning | Statistical Modelling | Financial Analytics | Data Engineering | Cloud Systems

Work Experience

Regulatory Data Researcher / Engineer – *Fleet Street Research, UK (Freelance)*   Oct 2022 – Jan 2024
- Maintained **Python + SQL ETL** pipelines to collect and transform compliance data across **MySQL** and **SQLite**
- Scraped compliance data using **Python scripts** with **BeautifulSoup4** and **Selenium** which improved data acquisition and reduced time by **50%**
- Processed **large volumes of regulatory text**, built **ingestion/cleaning pipelines** and metadata checks to improve downstream **quality and recall from 10% to 15%**
- Practical experience with **AML, CFT, and KYC regulatory frameworks**, compliance data collection, and **risk analysis**

Data Scientist – *Yoshops.com, India (Internship)*   Feb 2022 – Apr 2022
- Solved challenges in dynamic pricing by automating analytics and deployed machine learning models, which increased pricing accuracy by **40%** and enabled better product insights
- Gained exposure to customer data analytics, segmentation, and digital platform integration

Data Scientist – *Forsk Coding School, India (Internship)*   Mar 2021 – June 2021
- Utilised **Flask** for **back-end integration**, enabled real time interaction with **sentimental analysis ML** outputs and deployed it as a scalable ML model on **AWS**, ensured high performance data processing pipelines

Certifications

- SQL Certification – *Hacker Rank*   August 2025
- Docker Foundation Professional Certification – *Docker. Inc*   May 2025
- Career Essentials in GitHub Professional Certificate – *GitHub. Inc*   May 2025
- AWS Databricks Platform Architect – *Databricks*   April 2025
- Databricks Fundamentals – *Databricks*   April 2025