Shriyansh Singh

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SUMMARY

Machine Learning Engineer specializing in **time series analysis**, **anomaly detection**, and **distributed ML systems** using **PyTorch**, **TensorFlow**, and **Ray** for log data processing

PROFESSIONAL EXPERIENCE

Machine Learning Engineer Intern *April 2024 - Dec 2024*
Hyphenova AI *Los Angeles, CA*

- **Implemented** a real-time **anomaly detection system** using **PyTorch** and statistical methods that monitored system metrics across distributed services, reducing incident response time by 65%
- **Developed** a **time series forecasting** pipeline for resource utilization prediction that achieved 28% lower RMSE than previous baseline models
- **Integrated** ML models into production services through robust API endpoints and containerization, enabling seamless deployment across cloud environments
- **Collaborated** with product managers and software engineers to define metrics, design monitoring dashboards, and implement alerting systems based on ML predictions
- **Optimized** model inference latency by 43% through quantization and parallel processing techniques, enabling real-time analysis of log data streams

Machine Learning Research Assistant *May 2022 - Oct 2022*
Enterprise Business Technologies Pvt Ltd *Mumbai, India*

- **Built** multivariate **time series models** using **TensorFlow** for detecting patterns in server logs that identified potential security threats with 91% precision
- **Engineered** feature extraction pipelines that processed unstructured log data into standardized formats suitable for machine learning algorithms
- **Presented** technical findings and model performance metrics to both technical and non-technical stakeholders through clear visualizations and reports

PROJECTS

Distributed Anomaly Detection Framework | *Python, PyTorch, Ray, Kafka* *Jan 2024 – Apr 2024*

- **Architected** a distributed system for **real-time anomaly detection** in log data using PyTorch for model training and Ray for parallel inference
- **Implemented** adaptive thresholding algorithms that dynamically adjusted based on seasonal patterns, reducing false positive alerts by 76%
- **Designed** a modular pipeline architecture supporting multiple detection algorithms (isolation forest, LSTM-based, transformer-based) with A/B testing capabilities

LLM-Enhanced Log Analysis System | *Python, TensorFlow, Hugging Face, FastAPI* *Sep 2023 – Dec 2023*

- **Developed** a hybrid system combining statistical models with **fine-tuned LLMs** to categorize and extract insights from unstructured log files
- **Created** a custom tokenizer and embedding approach optimized for system logs that improved classification accuracy by 37% compared to generic embeddings
- **Built** a RESTful API service using FastAPI that allowed integration with monitoring tools through standardized interfaces

SKILLS

Programming: Python, Java, C++, SQL, Shell Scripting, Jupyter Notebooks
ML Frameworks: PyTorch, **TensorFlow**, **Ray**, **vLLM**, Scikit-learn, HuggingFace Transformers, ONNX Runtime
ML Techniques: Time Series Analysis, **Anomaly Detection**, Classification, **LLMs**, Transformers, Multivariate Analysis
Big Data: Kafka, **Spark**, Hadoop, Elasticsearch, Apache Druid, Distributed Computing
Infrastructure: Docker, Kubernetes, CI/CD, MLflow, Git, AWS, GCP, Model Serving, Feature Stores

EDUCATION

Indiana University Bloomington Aug 2023 – May 2025
Master of Science in Data Science *Indiana, United States*

- Relevant Coursework: Machine Learning, Deep Learning, Distributed Systems, Big Data Architecture, Time Series Analysis, Neural Networks
- GPA: 3.8/4.0