Sunil Meena

9672135908 Sunilmeena00t@gmail.com linkedin.com/in/sunil-meena/

EDUCATION

Indian Institue Of Technology, Bombay
B.Tech. in Electrical Engineering | CGPA: 8.0/10.0 | Graduation: 2021

COURSEWORK

Fundamentals of Digital Image Processing, Foundation of Intelligence and Learning Algorithms, Advanced topics in Deep Learning, Speech and Natural Language processing

SKILLS

Languages	Java, Python, C++, SQL	**Frameworks**	SpringBoot, PyTorch, TensorFlow
Big Data	Spark, Hadoop, Kafka	**Databases**	Elasticsearc, Redis, PostgreSQL
Tools	Docker, Git, Ray	**Cloud**	GCP, Azure

WORK EXPERIENCE

Jio Platforms Limited, Mumbai
Software Engineer | June 2021 - Present

Big Data Optimizations with Apache Spark for High Performance
- Leveraged Apache Spark to enhance application performance by 50% increase in TPS by offloading computationally intensive tasks to dedicated Spark-based microservice.
- Implemented spark jobs for pre-computation and data compaction on data records to provide concise data for scheduled report generation reducing query computation time by 60%.

Scalable Search & Caching Optimization with Elasticsearch and Redis
- Designed and deployed Elasticsearch clusters while ensuring optimal resource allocation based on node roles to accommodate data volumes with a 30GB-300GB range per day.
- Managed ES clusters by providing appropriate shard allocation strategies, ensuring data redundancy through replica shards, and performing rolling restarts to minimize downtime.
- Improved application response time by 32% by implementing in-memory caching using Redis and composite aggregations to serve requests with similar unique keys.

LLM Applications with Optimized RAG, Real-Time Inference & Scalable ML Deployment
- Designed an LLM-based chatbot that offers auto-suggested questions and utilizes Redis for caching frequently asked Q&A for faster responses.
- Enhanced the Retrieval-Augmented Generation(RAG) pipeline by incorporating a cross-encoder-based re-ranking model and chunk indexing for improved performance.
- Developed a high-efficiency spam SMS detector by employing an ensemble of classifiers (KNN, SVM, Logistic Regression, etc.) with embedding feature vectors achieving an average F1-Score of 0.99 and 3600 TPS(inference) using optimized ONNX weights.

High-Throughput Network Analytics with Performance Tuning
- Developed statistical dashboard modules visualizing real-time network hierarchy metrics, enabling proactive outage detection and contributing to a 15% reduction in customer churn.
- Leveraged Java multithreading and asynchronous processing to parallelize compute-intensive tasks, reducing average latency by 40% and boosting user request throughput by 20%.

PROJECTS

Domain Adversarial Learning of Neural Nets *Feb 2020 – July 2020*
- Utilized Domain Adversarial Neural Networks (DANN) to extract domain-invariant yet task-discriminative features, enhancing model robustness across differing data distributions.
- Achieved a 50% improvement in classification accuracy by transferring deep feature representations learned from a source domain to a target domain with limited labeled data, outperforming fully supervised baselines.

Semi-Supervised Mammograms Classification *Jan 2020 - April 2020*
- Implemented self-supervised jigsaw puzzle reassembly on preprocessed DICOM(.dcm) images from the CBIS-DDSM dataset to learn transferable feature representations for medical imaging tasks.
- Achieved a 40% improvement in labeling accuracy over traditional supervised methods by leveraging self-labeling techniques for semi-supervised training.