HARDIK SRIVASTAVA

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EDUCATION

SRM Institute of Science and Technology   Chennai, TN
B.Tech in Computer Science Engineering with Specialization in Big Data Analytics (CGPA 9.56)   Jun 2023

SKILLS

Technical Skills	Machine Learning, Big Data, Micro-Services, Data Streaming, APIs, Unit Testing
Tools & Technologies	Java, Python, SQL, Spring, Flask, TensorFlow, Spark, Kafka, MQ, ZooKeeper, Splunk
Dev/MLOps	AWS (EC2, EKS, SageMaker, RDS, Glue, MSK, SQS), Docker, Kubernetes, Jenkins, MLFlow

EXPERIENCE

Software Engineer   Jun 2023 - Present
JPMorgan Chase & Co.   *Hyderabad, TS*

- Implemented a Semi-Supervised Learning-To-Rank algorithm using Gradient Descent in TensorFlow for a Client Screening Search Engine. Led to more nuanced ranking decisions for 10M+ records over BM25 and TF-IDF.
- Designed a low-latency high-throughput ETL Pipeline using AWS Glue, EC2 and SageMaker to maximize search relevancy. Fine-tuning the evaluation metrics resulted in a 0.84 nDCG and 62% mitigation in False Positives.
- Innovated the design of a Fine-Tuned NLP System to parse 100K multinational customer addresses using POS-Tagging. Leveraged RoBERTa architecture to achieve an accuracy of 98.1% while maintaining the inference speed of 17 records/sec.
- Developed and Deployed Spring Micro-Services for a Reconciliation System in AWS EKS to track daily metrics.
- Achieved a benchmark of 80% overall performance increment in the data processing pipeline using Round-Robin & FIFO scheduling, Multi-Threading and Spark Dynamic Partitioning. Led to $12.6K+ reduction in monthly AWS costs.

Research Intern   Jun 2022 - Sept 2022
McGill University - *Mitacs Scholar*   *Montreal, QC*

- Collaborated on a Transformer-based Spell-Check model using Triton & TFLite. Reduced inference latencies below 200ms.

Machine Learning Engineer - Intern   Jan 2022 - Jun 2022
Samsung Electronics   *Chennai, TN*

- Modernized a highly accurate Vocabulary Expansion system by training an Objective Function on different text distance metrics. Implemented a Word Association algorithm to optimize inferences resulting in 11% increase in improved decisions.
- Fine-tuned word embeddings using Bi-LSTMs for a Word-Sense Disambiguation task. Led to 6% increase in Jaccard index.

Research Intern   Aug 2021 - Nov 2021
Defence Research & Development Organization (DRDO) - Govt. of India   *Dehradun, UK*

- Implemented CLAHE algorithm in SR-CNN for image enhancement. Reduced over-amplification of contrast by 30%.

PROJECTS

No-Code Algo-Trading Portfolio Manager Implemented Mean Reversion algorithm for an Algo-Trading agent using Python and TensorFlow to execute client trades. Developed a Hybrid Recommendation engine to automate Algorithm Generation based on market and stock analysis. Optimized decisions by minimizing risk and shortfall by 15.2% using Backward Propagation.

LegalMate – Platform for Digital Legal Aid Scraped 10K+ documents with custom NER using Python for Automated Q/A. Leveraged XGBoost Classifier for Grievance Categorization task with TensorFlow Mixed Precision Training to optimize compute usage. Developed Micro-Services in Spring Boot with Multi-Threaded design for faster model inference.

PUBLICATIONS

- Multi-Modal Sentiment Analysis Using Text and Audio for Customer Support Centers [ref.]
- Decision Support Complaint Prioritization System using a Statistical Multi-Method Algorithmic approach [ref.]
- Neural Text Style Transfer with Custom Language Styles for Personalized Communication Systems [ref.]

ACCOMPLISHMENTS

- **Certifications** — AWS Certified Cloud Practitioner, AWS Certified Machine Learning Specialist
- JPMC AWS DeepRacer Regionals 2023 — **2nd Position**
- Smart India Hackathon Nationals 2023 — **1st Position**
- Kaggle Machine Learning Challenge Aaruush 2021, SRM University — **1st Position**