VIBHOR MECHU

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EDUCATION

New York University New York, USA

Master of Science in Computer Science (Recipient of Merit-based scholarship) GPA: 3.67/4.0 Expected May 2025

Relevant courses: Advanced Machine Learning, Deep Learning, Big Data, Artificial Intelligence, Analysis of Algorithms, Software Engineering

Manipal University Jaipur Rajasthan, India

Bachelor of Technology in Electronics and Communication Engineering GPA: 3.84/4.0 Jul 2018 – Jul 2022

TECHNICAL SKILLS

Programming Languages and Frameworks: Python, SQL, C/C++, JavaScript, HTML5, Streamlit, React, Django

Machine Learning and AI : PyTorch, TensorFlow, Sci-kit Learn, Pandas, NumPy, MatplotLib, LangChain, Hugging Face

Big Data and Analytics: PySpark, Vector Database, Grafana, MongoDB, Kafka, PowerBI, Hadoop, Dask, Tableau, Airflow

Cloud: AWS Services (EC2, S3, Lambda, Cognito, IAM, API Gateway, EKS, ECS, DynamoDB); Google Cloud Platform (Compute Engine, Cloud Storage, Cloud Functions, Cloud IAM, Kubernetes Engine, BigQuery)

PERSONAL PROJECTS

NewsLens | *Stable Diffusion, RAG* Mar 2024 - May 2024

* Developed an AI-driven system for automated news retrieval, summarization, and visualization, enhancing user experience.
* Engineered a Retrieval-Augmented Generation model with LangChain and Google Palm LLM for accurate news content retrieval and prompt generation for Stable Diffusion model, resulting in contextually relevant images based on news content.
* Fine-tuned BART to summarize multiple articles retrieved from the FAISS database into concise and informative summaries.

Real-Time Forex Trading and Arbitrage Detection System | *Kafka, Spark, BigQuery* Mar 2024 - May 2024

* Designed a comprehensive forex trading system using Apache Spark for data processing and arbitrage calculations, enhancing trading strategies and operational efficiency.
* Created and deployed a Bi-Directional LSTM model for accurate price prediction, utilizing Flask for real-time model serving and Apache Airflow for managing data ingestion, complemented by a real-time Looker Studio dashboard to monitor forex trends and arbitrage opportunities.

CineVerse | *Django, React* Feb 2024 – Apr 2024

* Developed CineVerse, a social media platform for movie enthusiasts, using React, Django to create a seamless user experience.
* Implemented an interaction system, facilitating movies discussions and reviews, and integrated a movie database with access to over 10,000 titles.
* Enabled direct messaging and group features, fostering community building and private conversations among users with similar interests.

Dining Concierge Chatbot | *Lambda, API Gateway, Lex, SQS, Elasticsearch, DynamoDB, CDK* Jan 2024 – Feb 2024

* Employed event-driven architecture to create a scalable and serverless dining concierge application offering intelligent user-specific recommendations
* Utilized AWS Cloud Development Kit (CDK) and Python for automated provisioning of cloud infrastructure, integrating Amazon Lex for conversational capabilities, Elasticsearch for scalable restaurant data indexing, and SES for seamless real-time notification delivery.

WORK EXPERIENCE

Ericsson New Delhi, India

Software Developer Intern Jan 2022 – Jul 2022

* Contributed in a five-member team by resolving META (Facebook) Network Appliances' caching issues, and enhancing system performance and user experience in Asia-Pacific region through algorithm optimization and ISP collaboration.
* Led design and implementation of an advanced crash reporting system using Python for backend development. Analyzed crash data to debug and refine code, improving application stability and service quality by 35%.
* Collaborated closely with the Facebook Network Appliance team in an Agile development environment. Utilized expertise in software development and Ericsson service management tools to diagnose and resolve critical software issues, effectively reducing system downtime by 10% in six months.

Central Manufacturing Technology Institute Bengaluru, India

Machine Learning and Automation Intern Jun 2021 – Sep 2021

* Applied reinforcement learning to simulate a universal robot on Gazebo, optimizing operations and cutting labor costs by 20%.
* Constructed an IoT-based predictive maintenance system for an abrasive flow machine with PLC integration, utilizing time series analysis to boost reliability by 15%.
* Crafted software solutions to automate manufacturing processes, enhancing productivity.

Verzeo Bengaluru, India

Machine Learning Intern Feb 2020 – Mar 2020

* Strategically harnessed Python-based Data Analytics, Machine Learning, and AI techniques for in-depth exploratory data analysis (EDA) on datasets exceeding 100 GB, resulting in a 10% improvement in data-driven decision-making efficiency.
* Analyzed and synthesized classification models including K-nearest neighbors (K-NN), Support Vector Machine (SVM), and Logistic Regression in Cytopathology data research, successfully deducing SVM's highest accuracy rate of 97.2% for breast cancer diagnosis.
* Boosted price prediction accuracy by 15% through the implementation of a linear regression model on GitHub's Appstore games data, using game features as independent variables and app prices as dependent variables.