Sathvik Ramappa

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EDUCATION

Master of Science (MS), Data Analytics Engineering **May 2025**
GPA – 3.6, Northeastern University, Boston, MA, USA
Coursework – Supply Chain Management, Algorithms, Neural Networks and Deep Learning, Natural Language Processing

Bachelor of Engineering (BE) **Jun 2022**
GPA – 3.72, Ramaiah Institute of Technology (Affiliated to VTU)
Coursework – Image Processing with Python, Introduction to AI and ML, Mechatronics, Operations Research

SKILLS

Programming Languages: Python, SQL, Oracle SQL, MATLAB, R, HTML, CSS, JS
Cloud and Databases: AWS, Microsoft Azure, Snowflake, MySQL, NoSQL, MongoDB, Neo4j, ETL, Data Warehousing, Hadoop
Libraries and Frameworks: PyTorch, TensorFlow, ScikitLearn, OpenCV, XGBoost, Django, Flask, Plotly, Seaborn
Analytics: Google Analytics 4 (GA4), Google Tag Management (GTM), Adobe Analytics, BigQuery, KNIME
Reporting & Visualization: Data modeling, dashboard development, KPI tracking, ad-hoc reporting, Tableau, Power BI, Spotfire
Certifications: MongoDB Associate Developer – Python

EXPERIENCE

Research Analyst, Northeastern University **Jul 2025 – Present**
Machine Learning Engineering (Skills: Python, SQL, MLOps, Recommendation Systems, ML Pipeline Automation)
- Design, develop, and deploy LLM models for scalable production environments with focus on MLOps and recommendation systems
- Automate ML pipelines and model lifecycle management while building intelligent recommendation systems using user data
- Conduct literature reviews, prototype, and test state-of-the-art ML tools for scalable deployment in production workflows

Data Analyst, Nike Inc **Jan 2023 – Jul 2023**
Digital Web Analytics (Skills: HTML, CSS, JS, GA4, GTM, Python, SQL, Power BI, BigQuery)
- Implemented and configured Google Tag Manager (GTM) with complex tags, triggers, and variables to optimize data flow, improving data accuracy by 25% across digital platforms
- Employed GA4 and BigQuery to conduct A/B testing and web traffic analysis, querying 5M+ user records using SQL to analyze click-through rate, conversion rate, and cost per click metrics
- Extracted actionable insights using Python scripts to automate data processing from GA4 and BigQuery, driving a 30% increase in CTR and 20% improvement in conversion rates while reducing CPC
- Developed interactive Power BI dashboards integrating GA4, GTM, and BigQuery data with SQL queries to visualize conversion funnels and customer journeys, contributing to a 15% boost in customer engagement within two months
- Resulted in a 10% increase in customer retention and 15% improvement in overall metrics through Python-based predictive models and BigQuery cohort analysis

Data Analyst, The Home Depot **Sep 2022 – Dec 2022**
Customer Experience Management (Skills: Python, ScikitLearn, PyTorch, NLP, BERT, NoSQL)
- Contributed to optimizing chatbot communication by implementing NLP-based intent classification (BERT) and sentiment analysis (VADER), achieving a 28% reduction in response time and 22% boost in satisfaction scores
- Assisted in A/B testing and statistical analysis of chatbot strategies, refining user interactions and driving a 15% increase in customer
- Applied LDA-based topic modeling on chat transcripts to uncover key customer pain points, enabling targeted improvements and a 30% rise in first-contact resolution
- Developed Power BI dashboards and collaborated on automated feedback loops, supporting real-time CX tracking, continuous NLP model retraining, and a 12% improvement in customer experience metrics

Data Scientist, OpenDataDSL **Jun 2022 – Aug 2022**
Predictive Analytics (Skills: Python, MySQL, NoSQL, MongoDB, MS Azure, Power BI)
- Engineered robust time series pipelines to process high-frequency IoT sensor data from water treatment systems, utilizing Python and SQL to detect anomalies and model operational patterns at scale
- Deployed advanced forecasting solutions on Microsoft Azure, harnessing cloud-native parallel computing to reduce model training and inference time by 50%
- Integrated predictive maintenance capabilities into production workflows by synthesizing sensor outputs with ML models, enhancing reliability and reducing downtime in water treatment processes

PROJECTS

TagRL, 3D Multi-Agent Reinforcement Learning Tag Simulation **Jan 2025 – May 2025**
- Implemented Q-Learning algorithm based on Markov Decision Process for 3D multi-agent tag simulation
- Developed separate A-star search algorithm with NetworkX for 3D pathfinding and comparison
- Analyzed performance differences between Q-Learning and A-star search approaches in the 3D environment
- Achieved 15% improvement in 3D pathfinding efficiency and a 10% increase in tag success rate with the hybrid A* - Q-Learning

Customizable NLP Grading Platform **Oct 2024 – Dec 2024**
- Automated subjective exam grading using fine-tuned RoBERTa-base and BART models, achieving 92% scoring accuracy
- Reduced training time and GPU memory usage by 60%+ through Parameter-Efficient Fine-Tuning (LoRA)
- Generated diverse, rubric-aligned synthetic datasets for multiple domains using advanced LLMs (GPT-4o and Llama-70B)
- Built and deployed a Django web app with Hugging Face integration for real-time grading and feedback on consumer hardware