Anthony Kommareddy

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Summary

Experienced AI Engineer and Research Assistant with a strong background in machine learning, large language models, and data analysis. Skilled in developing and deploying AI solutions that drive business growth and operational efficiency.

Experience

AI Engineer: BhizChat INC, San Jose, California

Oct 2024 - Present

- Engineered and deployed LLM models and NLP solutions via Docker and Jenkins CI/CD pipelines, optimizing workflows, increasing conversion rates by 30%, and reducing cart abandonment by 25% for 3,000+ users.
- Executed **GPT-4**-powered product recommendation systems, incorporating real-time data analysis with tools such as Pandas and TensorFlow, driving a 40% improvement in product discovery and satisfaction.
- Designed an analytics dashboard using Streamlit and Python, incorporating A/B testing frameworks to optimize chat interactions, boosting average order values by 20% for 500+ businesses.

Research Assistant: SJSU Research Foundation, San Jose, California

Jul 2024 - Present

- Created an interactive intrusion detection dashboard leveraging Random Forest classifiers and integrating SHAP and LIME for explainable AI insights on the KDD99 dataset.
- Orchestrated the integration of **GPT-3.5** Turbo conversational agents, translating threat detection into clear, actionable insights, streamlining analyst workflows.
- Evaluated system accuracy using CISM best practices, employing precision-recall metrics and Python libraries like Scikit-learn to deliver actionable insights with high precision.

Research Scientist Intern: Ericsson, Stockholm, Sweden

Jan 2023 - Jul 2023

- Optimized error detection in log files by employing SVM, multinomial Naive Bayes, and LSTM models, utilizing TensorFlow and Scikit-learn, streamlining system integration and verification processes.
- Conceptualized and devised verdict generation algorithms leveraging Luhn, LSA, and LexRank, benchmarking results against GPT-3.0 to automate log classification, reducing manual efforts by 50%.
- Constructed an anomaly detection pipeline for large-scale log datasets using **Regex**, TensorFlow, and LLMs, enhancing operational efficiency by 30% and accuracy rates significantly.

Machine Learning Intern: Intone INC, Hyderabad, India

Jan 2023 - Jul 2023

- Improved risk classification accuracy by 25% through **TensorFlow** and Scikit-learn, leveraging big data frameworks like Apache Spark and Hadoop for efficient model training and deployment.
- Developed and deployed an OCR-based cheque and invoice reader utilizing OpenCV and **Tesseract**, accelerating data processing by 40% and automating anomaly detection using NLP models.
- Designed and implemented a facial recognition attendance system leveraging YOLOv8 and OpenCV, streamlining attendance management workflows and boosting operational efficiency by 20%.

Projects

Personal Finance Analysis | LLMs, LLaMA, Vector Database, ChromaDB, Streamlit

Jul 2024 - Aug 2024

- Engineered a tool using Local LLMs with 90% accuracy for transaction classification.
- Integrated PDF loaders and vector databases for scalable analysis and predictive financial insights.

Smishing Attack Detection in Messages | — RoBERTa, Transformers, Streamlit

Jan 2024 - Mar 2024

- Engineered a detection model, achieving 95% accuracy and reducing attack risks by 60% through advanced filtering techniques.
- Built an interactive UI using Streamlit, providing 40% faster result visualization for enhanced user experience.

Education

San Jose State University

Jan 2024 – Dec 2025

 $Master\ of\ Science\ in\ Artificial\ Intelligence$

San Jose, CA

Blekinge Institute of Technology

Aug 2018 – May 2022

Master of Science in Computer Science and Engineering

Karlskrona, India

Course Work: Recommender Systems, Data Mining, Artificial Intelligence, Deep Learning, Machine Learning Cloud Computing, Object-oriented programming, Data Structures & Algorithms, Database Management Systems, Web UI Programming

Skills

Languages: Python, C, C++, HTML, CSS, Java, JavaScript, TypeScript, SQL, C++, Java

Frameworks: PyTorch, Tensorflow, Flask, Keras, Pandas, OpenCV, RESTful APIs, scikit learn, Node.js, React.js

Technologies: Linux, MongoDB, Postgres, MySQL, AWS, Git, LLMs, GenAI, AWS, GCP, Azure

AI / ML: TensorFlow, PyTorch, Keras, Transformers, LangChain, MLops, LLMOps, CV, NLP, Matplotlib, Streamlit, Tableau Developer Tools: Github, Docker, Kubernetes, GPUs, Selenium, Agile, Jira, Postman

Publication

[1] Kommareddy, Anthony. "System Integration and Verification Verdict Automation Using Machine Learning" Presented at BTH, 2023. Conducted under Dr. Prashant Goswami and Ericsson advisors Jerker Zetterlund and Sike Huang, this research explores reducing system integration time for the Cloud RAN project using machine learning and NLP and automated verification process that improved error detection and developed a web application to optimize workflows.