Rahul Chemitiganti

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Education

Johns Hopkins University Baltimore, MD, US
Master of Science in Engineering - Computer Science *SGPA: 3.67, Expected May 2026*

Technical Skills

Languages: C, C++, C#, CSS, HTML, Java, JavaScript, MQL, Python, SQL
Data Science and Analytics: NumPy, Pandas, Matplotlib, Seaborn, Power BI, Tableau, Jupyter Notebooks
Machine Learning and AI: TensorFlow, Keras, PyTorch, Scikit-learn, OpenCV, NLTK, Transformers (Hugging Face)
Areas: Artificial Intelligence, Deep Learning, Natural Language Processing, Software Development, Model Evaluation

Experience

Artificial Intelligence / Machine Learning Engineering Intern May 2025 – Jun. 2025
SoKat *Baltimore, MD*
- Developed a hybrid metric combining TF-IDF, BoW, Word2Vec, and BERT to measure data enrichment scores
- Enriched sentences showed a 28% boost in metric scores and higher TTR, indicating greater lexical diversity
- Confusing sentences showed 35% more divergence validating the metric's ability to flag low-quality generations

Data Analytics Intern Dec. 2024 – Present
Johns Hopkins University *Baltimore, MD*
- Assisted by labeling 500+ outputs and annotating groundtruth data for testing at the CCVL research group

Graduate Course Assistant: Blockchains and Cryptocurrencies Sep. 2024 – Dec. 2024
Johns Hopkins University *Baltimore, MD*
- Created and executed test cases for autograding blockchain-related assignments on Gradescope
- Assisted in grading 50+ assignments and providing feedback on consensus mechanisms and smart contracts

Software Intern Nov. 2023 – Jan. 2024
Bosch *Bengaluru, India*
- Engineered a software, Simu Bridge, using C# and XML to simulate Programmable Logic Controllers (PLCs) with Modbus server functionality, improving testing efficiency by 30% for automation systems
- Developed the application with a user-friendly interface that allowed users to configure more than 8 Modbus tags, connection settings, and multiple instances, improving the simulation process for automation engineers

Advanced App Engineering Analyst Jun. 2023 – Jul. 2023
Accenture *Bengaluru, India*
- Gained hands-on experience in Identity and Access Management (IAM) focusing on 3+ security protocols
- Analyzed 5+ IAM workflows to improve RBAC and compliance with organizational security standards

Projects

Optimising Container Consolidation for Efficient Resource Utilization Feb. 2024 – May 2024
- Devised a custom Virtual Machine migration algorithm for energy-efficient container management
- Simulated real-world cloud workloads using CloudSim and the PlanetLab dataset, processing over 10,000 Virtual Machine migrations per threshold setting
- Benchmarked the proposed algorithm against Maximum-Correlation and Minimum Migration Time algorithms, showing a 20–30% reduction in Virtual Machine migrations and 10% fewer Service Level Agreement violations
- Optimized Virtual Machine migration using CPU and memory utilization parameters, reducing Virtual Machine shutdowns by 15%, improving cloud resource efficiency

Compiler Design for Recognizing Different Programming Languages Dec. 2023 – Jan. 2024
- Constructed a compiler for effectively identifying 4 different programming languages within a single input
- A lexer is implemented using the PLY library and recognizes over 50 unique tokens in Python, C++, C, and Java
- Supports over 10 unique language constructs such as function definitions, variable declarations, loops etc.

Accent Detection in Indian Languages through CNN based Spectrogram Analysis Feb. 2023 – Jun. 2023
- Trained a deep learning model using CNNs for Indian accent classification, achieving 82% accuracy
- Curated and processed a novel dataset of around 7,000 1-minute audio samples from YouTube
- Utilized MFCC preprocessing, extracting 13 coefficients per frame to enhance feature extraction.
- Applied LIME analysis to interpret model predictions, identifying top 10% most influential spectrogram regions affecting classification decisions