# 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)

Core CS: Data Structures and Algorithms, Object-Oriented Design, System Design

 $\bf Areas:$  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
- $\bullet$  Low-quality sentences showed 35% more divergence, validating the metric's ability to flag confusing generations

# Data Analytics Intern

Dec 2024 – May 2025

Johns Hopkins University

Baltimore, MD

• Labelled and validated 500+ outputs, refining evaluation metrics 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

- Developed Simu Bridge, a simulation tool for Programmable Logic Controllers (PLCs) with Modbus server functionality using C# improving automation system testing efficiency by 30%
- Designed a user-friendly interface enabling configuration of 8+ Modbus tags, connection settings, and parallel simulation instances, streamlining workflows 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

## Virtual Machine Migration Optimizer for Cloud Resource Efficiency

Feb 2024 - May 2024

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

# Multi-Language Code Recognizer using Custom Compiler

Dec 2023 – Jan 2024

- Constructed a compiler for effectively identifying 4 different programming languages within a single input
- Implemented a lexer using the PLY library capable of recognizing 50+ tokens across Python, C++, C, and Java
- Supports over 10 language constructs including function definitions, variable declarations and control structures.

#### 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.
- $\bullet$  Applied LIME to interpret model predictions, identifying top 10% most influential spectrogram regions impacting classification