# Rahul Chemitiganti

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#### EDUCATION

## Johns Hopkins University

Baltimore, MD, US

Master of Science in Engineering - Computer Science

Expected May 2026

## TECHNICAL SKILLS

Languages: C, C++, C#, CSS, HTML, Java, JavaScript, MQL, Python, SQL

Database: MongoDB, MySQL

Areas: Artificial Intelligence, Data Analytics, Deep Learning, Natural Language Processing, Software Development Libraries and Frameworks: Keras, Tensorflow, Numpy, Pandas, Matplotlib, NLTK, Pytorch, PowerBI, Tableau

## EXPERIENCE

## Artificial Intelligence / Machine Learning Engineering Intern

May. 2025 – Present

SoKat

Baltimore, MD

- Developed a hybrid metric combining TF-IDF, BoW, Word2Vec, and BERT to measure data enrichment scores
- Built semantic similarity pipelines with transformer models, refining metrics through distribution analysis
- Validated enrichment quality via metric-based comparison of raw, rephrased, and enriched texts.

#### **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