JOSEPH MOHANTY

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EDUCATION

Rice University *Aug 2023 – Dec 2024*
Master of Science, Computer Science, GPA: 3.73/4

Manipal Institute of Technology *Jul 2018 - Aug 2022*
Bachelors in Technology, Computer Science Engineering, GPA: 8.44/10

PROFESSIONAL EXPERIENCE

Rice University **Houston, TX**
Research Assistant *May 2024 - Present*
- Working on Ein-Summable (A system to help run ML tasks efficiently across multiple computers) under Prof. Chris Jermaine
- Setting up CI for automated testing, streamlining the development process by 50%.

Rice University **Houston, TX**
Teaching Assistant *Jan 2024 - Apr 2024*
- Assisted students in solving their doubts in SQL, Python Programming, AWS (EC2 and Lambda), and Apache Spark.
- Providing feedback about the course to instructors and fine-tuning assignments; increasing student engagement by 60%.

UBS **Pune, MH, India**
Tech Engineer - Investment Banking *Jul 2022 - Jul 2023*
- Led bi-weekly code release activities; Implemented application enhancements and user stories; improving client satisfaction by 30%.
- Reduced manual effort by 15% to resolve technical issues by automating Shell scripts.
- Monitoring application logs, analyzing database discrepancies, leading to 40% reduction in errors and enhancing overall system stability.

UBS **Pune, MH, India**
Tech Engineering Intern - Asset Management *Jan 2022 - Jun 2022*
- Automated mapping of ESG files which reduced manual effort by 70%.
- Worked on data cleaning using Python of ESG files, thus reducing processing time by 10%.
- Analysed downstream data, uncovering key trends and insights; improving deliverables quality by 40%, leading to a 25% increase in client satisfaction.

NTT Data Payment Services **Mumbai, MH, India**
Product Engineering Intern *Jan 2021 – Sept 2021*
- Extraction of Merchant IDs using Python; Reduced errors in pre-processing by 80% by eliminating faulty IDs.
- Implemented Unit Test Cases for their Online Transaction Switch (OTS) and checked the code coverage to be greater than 90% using SonarQube.

PROJECTS & PUBLICATIONS

URL Shortener
Rice University
- Developed a URL shortener service using Go, MongoDB, and Gorilla Mux, allowing users to shorten, manage, and retrieve URLs efficiently through a RESTful API.
- Optimized backend architecture with Go, reducing latency by 35% and enabling efficient handling of 10,000+ simultaneous requests.

Brain Tumor Detection
Rice University
- Designed a custom CNN; Achieving a test accuracy of 95% on a custom dataset using multiple MRI Scans acquired from Kaggle and Tianjin Medical University
- Improved pre-trained models (EfficientNet-B0) using hyper-parameter tuning; Models achieved test accuracies of 97%

Student Grievance Portal
Smart India Hackathon
- Formulated a sentiment analyzer using LSTMs to understand the priority of certain grievances; Model achieved test accuracy of 87%.

Multimodal Sentiment Analysis of #MeToo Tweets Using Focal Loss
IEEE BigMM Conference
- Implemented a Multi-modal Bi-Transformer (MMBT) model which combines both image and text features to produce an optimal prediction of a tweet's stand and sentiments on the #MeToo campaign.

SKILLS

Programming Languages: Python, C/C++, Java, GO, JavaScript, PL/SQL
Databases: Microsoft SQL Server, Oracle SQL Databases, MongoDB
Libraries and Frameworks: PyTorch, TensorFlow, NumPy, Pandas, Matplotlib, Scikit-Learn, JUnit, Mockito, Spring Boot
Others: Git, GitHub, Bitbucket, Elasticsearch, MapReduce, AWS (EC2 and Lambda), Apache Spark