

JOSEPH MOHANTY

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EDUCATION

Rice University

Master of Science, Computer Science, GPA: 3.73/4

Aug 2023 – Dec 2024

Manipal Institute of Technology

Bachelors in Technology, Computer Science Engineering, GPA: 8.44/10

Jul 2018 - Aug 2022

PROFESSIONAL EXPERIENCE

Rice University

Graduate Research Assistant

Houston, TX

May 2024 – Present

- Working on Einsummable (a system designed to help run machine learning tasks efficiently across multiple computers) under Prof. Chris Jermaine.
- Developing a Python Interface and wrapper functions to train Llama-3 by distributing Machine Learning compute graphs across CPU clusters.
- Setting up CI for automated testing and configured workflows to echo results on a remote server during pull request event, significantly streamlining the development process.

Rice University

Teaching Assistant – Graduate Tools and Models for Data Science

Houston, TX

Jan 2024 - Apr 2024

- Responsible for assisting 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 according to the latest technological practices.

UBS

Tech Engineer - Investment Banking

Pune, MH, India

Jul 2022 - Jul 2023

- Led bi-weekly code release activities; Implemented application enhancements and user stories.
- Reduced manual effort by 15% to resolve technical issues by automating Shell scripts.
- Monitoring application logs, analyzing database discrepancies, and swiftly resolving issues to ensure system stability and enhance overall operational efficiency.

UBS

Tech Engineering Intern - Asset Management

Pune, MH, India

Jan 2022 - Jun 2022

- Automated mapping of ESG files which reduced manual effort by 50%.
- Worked on data cleaning using Python of ESG files, thus reducing processing time by 10%.
- Provided insights from downstream files using data visualization techniques; Boosting the quality of deliverables.

NTT Data Payment Services

Product Engineering Intern

Mumbai, MH, India

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.
- Leveraged GoLang for its high-performance and concurrency support, ensuring efficient handling of numerous simultaneous requests and reducing latency in URL redirection

[Brain Tumor Detection](#)

Rice University

- Engineered a custom dataset using multiple MRI Scans acquired from Kaggle and Tianjin Medical University
- Designed a custom CNN; Achieving a test accuracy of 95%
- 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 lodged.
- Acquired custom dataset from university; 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, Mongo DB

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