JOSEPH MOHANTY

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EDUCATION

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

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

SKILLS

Programming Languages: Python, C/C++, Java, GoLang, JavaScript, TypeScript, Scala, PL/SQL
Databases: Microsoft SQL Server, Oracle SQL DB, Postgres, MySQL, MongoDB
Libraries and Frameworks: Django, PyTorch Spring Boot, JUnit, Mockito, ReactJS, NodeJS
Other: Kubernetes, ElasticSearch, MapReduce, Apache Spark, Git, GitHub, GitLab, Jenkins, GitLab CI

PROFESSIONAL EXPERIENCE

Rice University   **Houston, TX, USA**
Research Intern (C++, CUDA, Python, YAML, GitHub Actions, LLMs)   *May 2024 - Present*
- Developed Ein-Summable - A system to help run Machine Learning tasks efficiently across multiple computers.
- Integrated Llama 3 with CUDA for GPU-accelerated inference, **reducing latency** and **boosting LLM Inference speed**.
- Set up CI for automated testing, streamlining the development process **by 50%**.

UBS   **Pune, MH, India**
Tech Engineer (Java, SpringBoot, Oracle SQL, Kafka, Shell Scripting, Linux RHEL Servers, Agile, Scrum)   *Jul 2022 - Jul 2023*
- **Led bi-weekly code release activities**; Implemented application enhancements; **improving client satisfaction by 30%**.
- Designed and integrated Shell Scripts that **slashed manual workload by 15%**.
- Monitored application logs, analyzing database discrepancies, leading to **40% reduction in errors** and enhancing overall system stability.

Tech Engineering Intern (Python, Pandas, Matplotlib, NumPy, Oracle SQL, Unix, Agile, Scrum)   *Jan 2022 - Jun 2022*
- Automated mapping of ESG file**, reducing manual effort by 70%**.
- Cleaned ESG data using Python, thus **reducing processing time by 10%**.
- Analysed downstream data, uncovering key trends and insights; **improving deliverables quality by 60%**.

NTT Data Payment Services   **Mumbai, MH, India**
Product Engineering Intern (Java, JUnit, Mockito, SpringBoot, Python, Pandas)   *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 an Online Transaction Switch (OTS) and checked the **code coverage to be greater than 90%** using SonarQube.

PROJECTS & PUBLICATIONS

URL Shortener
Rice University (Go, MongoDB, Gorilla MUX, JavaScript, REST APIs)
- Optimized backend architecture, reducing latency by 35% and enabling efficient handling of **10,000+ simultaneous requests** using REST APIs.

Brain Tumor Detection
Rice University (Python, PyTorch, NumPy, Pandas, Convolutional Neural Networks, Computer Vision)
- Improved Pre-Trained models (EfficientNet-B0) using hyperparameter tuning, **achieving 97% accuracy** on a custom MRI dataset.

Multimodal Sentiment Analysis of #MeToo Tweets Using Focal Loss
IEEE BigMM Conference (Python, BERT, NLP, PyTorch, NLTK)
- Implemented a Multi-modal Bi-Transformer (MMBT) model to predict a tweet's stand on the #MeToo campaign.