https://www.linkedin.com/in/rohit-mohanty/
https://github.com/r-mohanty
https://r-mohanty.github.io

# ROHIT MOHANTY

**Providence, RI, USA**
**Email:** rohit_mohanty@brown.edu | **Cell:** +1-401-226-8097

Summary: Master's in Computer Science student with focus and demonstrated experience in Distributed Systems and Machine Learning. Hands-on working experience in designing, developing and debugging large scale web applications using NodeJS and AWS.

## Work Experience

**Cumulus Digital Systems, MA, USA** — **Software Development Intern** — May 2022 – Aug 2022

**Timeseries Performance Boosting**
**Highlights:** Improved the performance of critical client-facing applications by implementing advanced data-structures and using AWS Timestream.
**Technologies Used:** NodeJS, JavaScript, AWS Timestream, AWS DynamoDB, TypeScript, Flow, Serverless, AWS Lambda
**Roles and Responsibilities:**
- Improved performance of critical applications by 70% by implementing a segment tree based data structure to utilize timeseries structure of data.
- Used multi-measure records in AWS Timestream to enhance the query speed by taking advantage of the timeseries structure of the database.
- Used GraphQL, AWS Lambda and serverless framework to deploy critical backend services to AWS CodePipeline.

**Column Name Matching and Generation**
**Highlights:** Implemented an NLP solution for matching and generating company-based column names for user-defined column names.
**Technologies Used:** Natural Language Processing, Word2Vec model, LSTM, RNN, Seq2Seq, Transformers, NumPy, Pandas, TensorFlow, Keras
**Roles and Responsibilities:**
- Used semantic information from current company-based and user -defined column names to generate new column names.
- Implemented a Seq2Seq model using a multi-headed attention based transformer to generate new company-based column names.
- Used contextual information from data in each column to derive stronger representations for the column names and improve the model.

**Dell, India** — **Software Development Engineer** — July 2017 – Sept 2019

**Highlights:** Worked for the Dell Federal Business Enablement Team that enables the end-to-end fulfilment of orders for US Federal Government.
**Achievements:** Dell Champions Award
**Technologies Used:** Python, Pivotal Cloud Foundry, React, C#, .Net, NodeJS, SOA
**Roles and Responsibilities:**
- Improved performance of middleware by 84% by implementing critical SOA services in Python and migrating them to Pivotal Cloud Foundry.
- Built the framework for automation & analytics of Siebel CRM migration activities using React and NodeJS and deployed it to PCF.

## Academic Projects

**Distributed Store**
**Technologies Used: C++, Distributed Systems, Sharding, Multi-Threading, Concurrency**
Built a distributed key-value store with a dynamic shard-master and a multi-threaded, low level optimized architecture using advanced C++ concepts.

**E-Commerce Website**
**Technologies Used: Java, Spring Boot, Angular, MySQL, TypeScript, HTML, CSS**
Built a full-stack e-commerce website. Used Java Spring Boot to build the backend and Angular to build the frontend of the website.

**Loglizer (Log Anomaly Detection Framework)**
**Technologies Used: Natural Language Processing (NLP), Deep Learning, Python, TensorFlow, Keras, Variational Autoencoders, LSTM, GAN, CNN**
Built a framework to process and detect anomalies in log files generated by large scale distributed systems using deep learning and NLP models.

**Sparse-Point-GNN**
**Technologies Used: 3D Object Detection, Deep Learning, Python, TensorFlow, Keras, Graph Neural Network (GNN), NumPy, KITTI Dataset**
Surpassed the performance of Point-GNN for 3D Object detection by using Neural Sparse based sparsification to enhance the robustness of the GNN.

**Photo-Realistic Super Resolution**
**Technologies Used: Deep Learning, Python, TensorFlow, Keras, GAN, NumPy, SRMAP**
Surpassed the performance of traditional deterministic super-resolution methods by proposing a novel Super Resolution MAP generative method.

**3D Shape Generation**
**Technologies Used: Deep Learning, Python, PyTorch, NumPy, Implicit field decoder, IM - Auto Encoders, IM – Generative Adversarial Networks**
Created a custom dataset of 3D shapes and trained a model to generate single-view 3D reconstruction of these shapes using implicit field decoders.

## Technical Skills

| | | | |
|---|---|---|---|
| **Languages** | C++, Python, C, JavaScript, Java, Shell script | **OS** | Windows, Mac, Linux |
| **Web** | REST API, SOAP, AJAX, HTML5, CSS, D3.js | **Libraries** | React, Scikit-learn, TensorFlow, Keras, PyTorch |
| **Frameworks** | .NET, Flask, OpenCV, Angular, NodeJS | **Databases** | DynamoDB, AWS Timestream, MongoDB, Redis, MS SQL Server, MySQL |
| **Cloud** | AWS Lambda, Pivotal Cloud Foundry, Serverless | | |

## Academics

**Master of Science (ScM) in Computer Science** at Brown University, RI — Aug 2021 - May 2023
**Bachelor of Technology in Electrical and Electronics Engineering** at IIIT Bhubaneswar, India — Aug 2013 - June 2017