

Shubham Shailesh Tamhane

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EDUCATION

University of Rochester

Master of Science: Data Science

Rochester, NY

Aug 2022-Dec 2023

- GPA: 3.95/4. Recipient of 40% merit scholarship
- Secured 2nd position in the 2022 UR Biomedical Data Science Hackathon

University of Mumbai

Bachelor of Engineering: Information Technology

Mumbai, India

Aug 2018-May 2022

- GPA: 3.73/4, CGPA: 8.95/10,
- Hackathon winner for creating video conferencing web application.

Relevant Courses: Time Series, Data mining, Statistics, NLP, Machine Learning, AI, Data Structures, Big Data

EXPERIENCE

Regeneron Pharmaceuticals, Data Science Co-op

Jun 2023-Present, Tarrytown, NY

- Implemented time series forecasting approach to predict customer demand of a complex **inventory management** problem employing multiple approaches including **statistical** and **deep learning** methods.
- Deployed a webapp built using **python-dash** that leverages **MLOps** workflow built on cloud-infrastructure to provide real-time up-to date data and forecasting predictions, customer analysis and model maintenance options to end users resulting in **\$25000** worth of material from being wasted.
- Led the development of a **maintenance analysis** system, optimizing the upkeep of MFCs and related systems, which resulted in substantial monthly savings of **\$10,000**.

URMC - Department of Neuroscience, Software Intern

Sept 2022-Jun 2023, Rochester, NY

- Engineered a verification system using pydicom library to confirm over **10,000** anonymized 'dcm' medical files within **60** seconds.
- Developed a Flask web service with **JWT** authentication and caching, reducing large JSON file load times to under 10 seconds. Deployed the service using **Docker** for improved system efficiency.

Exposys Data Labs, Data science intern

May 2021-Jun 2021, India

- Implemented clustering algorithms for customer segmentation & knowledge mining achieving 85% accuracy.

Sciffer Analytics Pvt Ltd, Data science intern

Oct 2020-Jan 2021, India

- Managed the development of image datasets using 'labelimg' tool for information extraction from Google in **3** months. This empowered a computer vision model to recognize over **30** distinct objects.
- Employed the **YOLO v3** model to build a deep learning classifier model, attaining an accuracy rate of 80%.

Department of Information Technology, RAIT, Software Intern

Jun 2020-Jul 2020 India

- Engineered a multi-user video communication application utilizing **Express** and **Node.js**.
- Implemented competitive programming practices, resulting in a **10-50%** performance optimization in C/C++.

SKILLS

- **Programming Languages:** Python, R, C, C++, Java, Spark, Hadoop
- **Data Manipulation and Visualization:** MySQL, MongoDB, Tableau, PowerBI, JMP, Excel
- **Framework and Libraries:** Sklearn, OpenCV, Tensorflow, Keras, Pandas, Numpy, ggplot2, pytorch, MLFlow
- **Machine Learning Methods:** Time series, ARIMA, CNN, SVM, Transfer-Learning, Computer Vision
- **Web Technologies:** HTML5, CSS3, Django, Flask, Dash, Streamlit, Nodejs, JavaScript, Express
- **Cloud Tools and Project Management:** Databricks, Dataiku, Seeq, Jira, Confluence, Agile

PROJECTS & PUBLICATIONS

- Tamhane, Shubham, et al. "Emotion Recognition Using Deep Convolutional Neural Networks." SSRN [Link](#)
A **deep convolutional neural network (DCNN)** was created and used to identify the mood of the user based on his facial expression. Accuracy of over **83.9%** was achieved.
- **Predicting and Analysing the Viral Fragments of Songs** [Link](#)
Utilized **dynamic time warping** to compare extracted **MFCC** features from songs and applied a weighted **SVM** classifier. Achieved 100% recall and 86% accuracy due to presence of data imbalance.
- **Dynamic QA generator for Research Papers** [Link](#)
Fine-tuned a **T5-base** model to create a **QA** system that generates and answers questions from research papers, enhancing paper interpretation.