

Sohaib Syed

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EDUCATION

ILLINOIS INSTITUTE OF TECHNOLOGY, CHICAGO, IL

May 2024

- Bachelor of Science, Computer Science, **3.91/4.0**
- Master of Applied Science, Data Science, **3.85/4.0**

Relevant Courses: Machine Learning, Applied Statistics, Data Mining, Data Prep & Analysis, Big Data Tech

EXPERIENCE

Machine Learning Intern

May 2022 - August 2022

Motorola Solutions Inc., Applied Technology

Schaumburg, IL

- Reduced 1000+ lines of code: extracted stand-alone Wav2Vec2.0 model from Hugging Face and reduced fine-tuned model delivery time by 1-mo, which led to increased productivity to complete 5+ experiments vs. 1 to improve Wav2Vec2.0 for Voice Activity Detection
 - Experimented with building 2 additional model versions, including a CNN and MLP layer, with PyTorch
 - Produced score files to classify every 20ms as speech or non-speech to simplify model evaluation
 - Documented detailed steps from model extraction to model evaluation to reduce time to reproduce results by 40%
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PROJECTS

Credit Card Fraud Detection Analysis

- Rebalanced training set using SMOTE in R to achieve a 65/35 split between positive and negative class from the original 99.9/.1
- Led a team of 4 by delegating tasks, creating schedules and meetings, and producing deliverables all by deadline
- Improved accuracy of the logistic model and decision tree model by 12% and 6% respectively
- Analyzed residuals and correlation to reduce feature size for simpler and more efficient models

Movie Recommender System

- Developed a content-based model in R to recommend a user 5 movies based on 10 movies a user likes
- Utilized simple cosine similarity function to determine similarity score to recommend movies
- Manipulated datasets to score user profiles based on watched genres of movies

Employee Database

- Implemented a SQL script to create a database with 7 tables used to store employee data
 - Programmed a Java application to communicate with a PostgreSQL database to keep and update employee information
 - Configured database to allow admin, manager, and employee users with different information privileges for improved security
 - Managed a team of 3 by organizing meetings and delegating tasks to meet project deadline
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SKILLS AND INVOLVEMENT

Programming Languages: Python, R, SQL

Technologies: PyTorch, TensorFlow, Jupyter Notebooks, Git, DBeaver, PostgreSQL, Bash, AWS: S3, EC2, EMR

Volunteer: Weekly volunteer at Sacred Learning Center, SLC Tech Group

Organizations: Muslim Student Association, Association for Computing Machinery