

HARSH SUGANDH

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EDUCATION

Rensselaer Polytechnic Institute (RPI), Troy, New York

Aug 2019- Dec 2020

Master of Science in Information Technology; GPA- 3.91/4.0

Shri Govindram Seksaria Institute of Technology and Science (SGSITS), Indore, India

July 2015- May 2019

Bachelor of Engineering in Information Technology

RELEVANT COURSEWORK

Software Development, Data Structures, Algorithms, Database Management System, Object Oriented Programming, Data Mining, Data Science, Introduction to Machine Learning Applications, Operating Systems, X-Informatics, Business Issues, and Data Analytics.

EXPERIENCE

Backend Developer, RPI Ambulance (Capstone), Troy, NY

Spring'20

Paramedics Training Tracking Application

- Eliminated 80% of paper-based manual tasks by developing a workflow system for the members, adopting the Agile methodology.
- Created REST APIs using Node.js Express framework, data models using PostgreSQL. Performed testing for the endpoints in Python.
- Collaborated with the RPI Ambulance team and improved 50% tracking process efficiency for the non-technical staff.

Teaching Assistant, Rensselaer Polytechnic Institute, Troy, NY

Fall'19, Spring'20, Fall'20

Computer Organization CSCI 2500

- Responsible for conducting labs (reviewing code and providing feedback), grading, proctoring, and mentoring 250+ students.
- Helped students comprehend concepts of C programming, MIPS Assembly Language, and Digital Logic during one on one sessions.

ACADEMIC PROJECTS

Sentiment Analyzer for YouTube Comments

Summer'20

- Implemented a full-stack web application using React, Bootstrap, CSS along with Python and Flask server for backend development.
- Utilized TextBlob for labelling, CountVectorizer for feature extraction, and Matplotlib and Seaborn for generating visualizations.
- Computed sentiment score with an accuracy of 89% using Logistic Regression Model, trained on 600,000+ textual comments.

Exploration System for New York Motor Vehicle Crashes | RPI

Fall'20

- Developed a Python application for querying data from 3 relational and a non-relational dataset using PostgreSQL and MongoDB.
- Worked on database setup, schema creation, data loading, normalization using libraries such as psycopg2, pymongo, and Pandas.

Walmart Store Sales Forecasting | RPI

Spring'20

- Forecasted sales of 45 Walmart stores along with the effect of markdown events to achieve the best case accuracy of 96.5%.
- Performed exploratory data analysis, encoding, and feature selection for Random Forest and Gradient boosting models in Python.

Severity Prediction of US Traffic Accidents | RPI

Fall'19

- Predicted the severity of accidents by analysing the publicly available Countrywide Traffic Accident dataset (2016-19).
- Achieved an accuracy of 72% with Random Forest algorithm and 65% with Multinomial Logistic Regression in R.
- Determined accident hotspots and the impact of precipitation, visibility, and other environmental stimuli on accident occurrence.

Fake News Detection System | SGSITS

Spring'19

- Designed a web application for categorizing the news as real or fake utilizing Python, Flask framework, HTML, and CSS.
- Scraped data and carried out data pre-processing using the NLTK library and feature extraction using the Bag of Words technique.
- Obtained an accuracy of 68% using the Naïve Bayes Classifier, trained on 300,000+ real and fake news articles.

Bookstore Management System | SGSITS

Fall'17

- Programmed a web-based application for the automation of bookstores using Java Server Pages (JSP), HTML, and CSS.
- Employed MySQL for the backend database and Apache Tomcat for handling the HTTP requests from the client.

TECHNICAL STRENGTH

Programming Languages: Python (High Proficiency), Java, C, R

Web Technologies: React, HTML, CSS, JavaScript, JSP, Flask

Database: MySQL, PostgreSQL, XML, JSON

Machine Learning: Pandas, NumPy, Natural Language Processing, KNN, CNN, Scikit-learn, Keras, Matplotlib, Seaborn, ggplot

Tools: RStudio, NetBeans, Eclipse, Git, Visual Studio, Jupyter Notebook, Anaconda, Argo UML, Dia, Turbo C

LEADERSHIP AND INVOLVEMENTS

Gamma Nu Eta, RPI: Member of the national Information Technology Honor Society in the USA.

Volunteer, Gramiksha: Helped students in public schools develop personal and social skills.

Event Organizer, SGSITS: Organized 16 different collegiate-club events for the college's cultural-technical fest.