ISABELLA STURM

Employment

General Motors Rochester Operations
MES/Database Developer

Rochester, NY (remote)
June 2019 to Current

- Assisted with server migrations from Windows Server 2012 to Windows Server Core 2016 virtual machines and database migrations of an OLTP and an OLAP database from SQL Server 2012 to SQL Server 2016; configured Window Server 2016 virtual machines with SSAS and SSRS and migrated reports to new Report Server
- Led troubleshooting efforts of the new OLTP databases by monitoring bottleneck queries using SQL Spotlight, optimizing stored procedures and working with global IT teams to increase storage and memory resources on the database servers
- Redesigned database backend for user management of our web application, changing from permission-based to role-based access. As part of this redesign, I also developed a feature for the web application to provide supervisors the ability to view and manage their teams in a hierarchical organization chart, restricting roles based on access levels of the current user's role
- Diagnosed a long-standing bottleneck in our database system that caused blocking and slowed or failed transactions; implemented a solution that eliminated the blocking and improved average transaction times by 250%

Computer Science Co-Op

Rochester, NY
Jan. 2018 to May 2019

- Collaborated with Controls Engineers to plan and then implemented the database solution for tracking non-serialized batch parts by designing and creating new SQL tables and stored procedures for data collection, processing and storage
- Developed new SSRS reports to view batch data, including a custom report for showing reject types and counts at a high-scrap process step for quality engineers to be able to analyze and implement scrap reduction plans
- Created a virtual machine with a copy of the production SQL Server databases, internal part tracking application and SSRS on a stand-alone PC used at machine builder sites for testing; configured the site server using Internet Information Services, setup the Report Server using the Reporting Services Configuration Manager, and enabled bridged networking to allow the host machine to run the sites without needing to access the sensitive information stored on the VM

RIT Academic Support Center
Supplemental Instruction Leader

Rochester, NY
Aug. 2016 to Jan. 2018

- Supported students in Java I courses by organizing biweekly study sessions and encouraging community building and collaboration among students
- Attended all classes, participated in labs, took all quizzes and exams, and completed every homework assignment in order to have effective study sessions and build trust with students

Projects

Language Detection

Feb. 2022 to Mar. 2022

Using Tatoeba dataset, created two Multinomial Naive Bayes models in Python to detect languages based on two different criteria for "Top 25 Languages".
- Used random sampling to undersample majority classes to balance dataset before modeling
- Created bigrams using CountVectorizer as features for the models
- Trained Multinomial Naive Bayes models that resulted in 95% accuracy for detecting the written language of the test dataset samples

Super Bowl Teams Prediction

Jan. 2022 to Feb. 2022

Combined data from two web sources to predict which teams are most likely to play in the Super Bowl.
- Used pandas to read html tables from nfl.com and pro-football-reference.com
- Cleaned and prepared the data to be merged into a single dataset
- Selected the top 35 features using SelectKBest from sklearn.feature_selection
- Scaled the data using StandardScaler from sklearn.preprocessing and trained three models: Support Vector Machine, Logistic Regression and Random Forest (96% accuracy)
- Inputted current season statistics into the model and outputted a table of the predictions with probabilities for each team

Will it Rain in Seattle?

Sept. 2021 to Nov. 2021

Predictive analytics project using historical rain data from Seattle. Given a date, the models will predict whether or not it will rain that day in Seattle.
- Used R to perform some exploratory data analysis on the data, including creating histograms, bar charts and line charts of the data
- Prepared and modeled the data in Python using Jupyter NotebookTrained and tested four models: Logistic Regression, Random Forest, K-Nearest Neighbors and Decision Tree (76% accuracy)

Venture Creations Project

Aug. 2018 to May 2019

- Performed the role of Project Manager for a team project that spanned two semesters
- Met with project stakeholders to gather requirements
- Planned and organized the tasks for the development stage of the project by creating Gannt and PERT charts
- Worked with team members to write documentation and user stories for the project
- Managed unexpected events, such as integrating new members into the team and changing of requirements
- Communicated updates on the project to stakeholders on a regular basis

Volunteering

RIT IST Department · Student Ambassador
Rochester, NY

May 2016 to May 2019

- Represented the IST department at events such as Open House, New Student Orientation and other department run events for current and perspective students and K12 students in the area
- Was a readily available resource for current and prospective students to ask questions and assist with finding their place at RIT and in the IST department

Contact

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Education

Rochester Institute of Technology

Aug. 2015 to May 2019

Bachelors of Science Web & Mobile Computing 2019

Bellevue University

Aug. 2020 to Mar. 2022

Masters Data Science 2022
Omega Nu Lambda National Honor Society

Skills

TECHNICAL SKILLS

SQL Server
Python
HTML
CSS
JavaScript
R
Power BI
Tableau

SOFT SKILLS

Organization
Leadership
Positivity
Critical Thinking
Strong Work Ethic