

Herleen Kaur Sanhotra

herleen.sanhotra@gmail.com | (704) 756-8253 | [linkedin.com/in/herleen-sanhotra](https://www.linkedin.com/in/herleen-sanhotra)

EDUCATION

Master of Science, Computer Science Aug 2019 - May 2021
University of North Carolina at Charlotte, NC **GPA: 4.0/4.0**
Relevant Coursework: Machine Learning, Natural Language Processing, Big Data Analytics, Knowledge-Based Systems(Google Cloud)

Bachelor of Engineering, Computer Engineering Aug 2013 - May 2017
University of Mumbai, India **GPA: 3.7/4.0**
Relevant Coursework: Data Warehouse & Mining, Database Management Systems, Artificial Intelligence, Data Structure & Algorithms

PROJECTS

Text Summarization on Amazon Food Reviews Sept 2020 - Dec 2020

- Built an abstractive text summarizer to create summaries of 600,000 reviews on **Google Colab** with a **GPU** environment
- Leveraged **Natural Language Toolkit** for preprocessing the text data, significantly reducing the noisy data by 68%
- Developed a multilayer **LSTM** model with an attention mechanism to remove limitations of long sentence sequences

Face Mask Detection on Image Dataset Sept 2020 - Dec 2020

- Built a face mask detector using a deep learning **Convolutional Neural Network(CNN)** and optimized the model by adding additional input facial features(eyes, mouth, and nose) to improve the detection of the face on the input images
- Tested the model's ability to classify a person wearing a face mask in real-time using **OpenCV**, giving an accuracy of 82%

Prediction of Severity of Traffic Accidents in the US Jan 2020 - May 2020

- Led a team of five to build a real-time prediction system that can be used to determine accident-prone areas based on factors such as time, weather, and location using **Python** for data preprocessing and **GCP** for modeling
- Trained a machine learning classification model that gave an ROC-AUC score of 0.98 and a precision of 86.96%

Data Analysis on Student Alcohol Consumption Jan 2020 - May 2020

- Conducted exploratory data analysis on secondary school students' dataset to understand various social and economic factors leading to alcohol consumption by creating data visualizations using **Python** libraries such as **Matplotlib** and **Seaborn**
- Calculated feature importance to find out the top 5 variables impacting the target variable using **Random Forest Classifier**

Walmart Store Sales Forecasting Aug 2019 - Dec 2019

- Led a team of four to forecast weekly sales by building six different regression models(**Linear, Ridge, Lasso, Elastic-Net, Decision Tree & Random Forest**) and comparing their performance using metrics R2 score and Root Mean Square Error
- Established **CRISP-DM** framework to plan different phases of the project and assess various challenges during each phase

TECHNICAL SKILLS

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- 2 years of experience in Python programming language for data analysis to carry out tasks such as data ingestion, data manipulation, data cleaning, data preprocessing, data visualization, data preparation, and modeling
 - Proficient in Python libraries namely Pandas, Numpy, Matplotlib, Scikit-Learn, Seaborn, Natural Language Toolkit, and Keras
 - Good understanding of relational database and ability to write queries in Structured Query Language(SQL) using MySQL
 - Sound knowledge and expertise in cloud technologies namely Google Cloud Platform(GCP), Google Colab, and Data Studio
 - Experience working with Jupyter Notebooks for data storytelling and exploratory data analysis
 - Working knowledge of web technologies HTML, CSS, and PHP for frontend development

EXPERIENCE

Trainee Programmer, Infinite IT Solutions Pvt. Ltd, India Mar 2018 - Sept 2018

- Gathered client requirements and identified ways to improve the design and development of an existing website
- Collaborated with the UI developer for updating different GUI components of the website using **HTML** and **CSS**

LEADERSHIP EXPERIENCE

General Secretary, IEEE, Branch Code 02461, Mumbai, India Aug 2016 - May 2017

- Responsible for conducting meetings, planning and organizing technical events for 100-200 college student participants

Managing Director, Women In Engineering(WIE), Mumbai, India Aug 2016 - May 2017

- Increased the female volunteers and members in the organization by approximately 5 times the initial participation