# Sambhav Shrestha

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#### **EDUCATION**

# St. Joseph's College, Brooklyn, NY

BS in Computer Science & Mathematics, June 2022 (anticipated) | GPA 3.97

- Courses: Algorithms & Data Structures, Advanced Programming, Advanced Databases, Multivariable Calculus, Software Engineering, Mobile Applications, Linear Algebra, Probability & Statistics
- Other Courses: Neural Networks and Deep Learning, Harvard CS50, MIT Computational Thinking & Data Science
- Awards: SJC President's Scholar, SJC Honors, Dean's list

#### **SKILLS**

Languages: Python, R, Java, SQL, JavaScript

Libraries and Frameworks: TensorFlow, Keras, Pandas, NumPy, SciPy, OpenCV, Matplotlib, ggplot2, dplyr, tidyr

Web: HTML, CSS, Bootstrap, jQuery, React, Flask, Ajax, Shiny

Tools and Technologies: Git, AWS EC2, Android Studio, pyGame

#### **EXPERIENCE**

### St. Joseph's College, Brooklyn, NY

Peer Tutor | Jan 2021 – Present

• Tutoring students in Calculus, Java Programming, and Computer Applications and helped them to prepare for tests

### IT Student Technician | Jan 2019 - Present

- Resolving any tech issues through phone or visiting onsite and providing fine customer service.
- Installed computers, projectors and tech networks in various campus events with technicians.

#### JP Morgan Chase/Forage

Software Engineering Virtual Experience | Jun 2020 – July 2020

- Worked on data visualization techniques to observe the ratio of two stocks and trigger alerts.
- Used JP Morgan's self-built framework, perspective, to stream analytics and data via Web Assembly.

### Web House Nepal, Kathmandu

Web Development Intern | Jan 2018 – July 2018

- Used jQuery, Bootstrap and PHP to manage and design websites for clients.
- Created custom front-end design for websites and presented them at the final seminar.

# **PROJECTS**

### **Twitter Sentiment Analysis in R** (ggplot, tidyr, dplyr, shiny):

- Developed a shiny dashboard that fetches tweets based on keyword and analyzes sentiment using lexicon approach; used ggplot and Wordcloud library for data visualization
- Added extra feature that analyzes user input text by using text mining and feature extraction

## Stock Price Prediction using LSTM (TensorFlow, Pandas, RNN, Matplotlib):

- Designed a deep recurrent neural network (RNN) that uses Long Short-Term Memory to model and predict the stocks prices utilizing API's to fetch the data
- Used Matplotlib to visualize the result and achieved the accuracy of ~ 90%

# Hand Drawn Digit Recognition App (JavaScript, TensorFlow, OpenCV, Flask):

- Created a flask app that lets users draw any digits on canvas and predicts the number with confidence percentage
- Developed deep convolutional neural network (CNN) using TensorFlow achieving the accuracy of ~98% and deployed the app in Heroku

# AI in Games (Python, pyGame, Reinforcement Learning)

- Programmed an AI in games like Minesweeper, Tic-tac-toe, Crossword Solver, and Nim using pyGame for GUI
- Used various techniques such as backtracking, minmax, Inference, and RL to build effective and undefeatable AI