# 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 from deeplearning.ai, Harvardx CS50 Intro to AI, MITx 6.0.0.2: Computational Thinking & Data Science
- **Awards**: SJC President's Scholar, SJC Honors, Dean's list

## SKILLS

**Languages:** Python, R, Java, SQL, JavaScript, C
**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, Android Studio, pyGame

## EXPERIENCE

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

Peer Tutor | Jan 2021 – Present

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

**MIT 6.S191 Deep Learning Bootcamp** (Feb 2021 – Mar 2021)

- Studied and applied concepts of computer vision and natural language processing in projects and applications.
- Worked on hands-on projects involving deep learning and reinforcement learning such as Music Generation with TensorFlow, Cartpole Balancing AI, Human Face Debiasing Agent and many more.

**JP Morgan Chase/Forage,** Online
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.

## PROJECTS

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

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

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

- Designed a deep recurrent neural network (RNN) that uses Long-Short-Term Memory to learn the stock market data from timeseries data; used API to fetch data and Pandas library to format it for model training.
- Used Matplotlib to visualize the result and achieved predictions with compelling accuracy.

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

- Constructed 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 and SciPy library to preprocess and train the data; achieved a stunning 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.