

# Shruti Belgali



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## Education

M.S. Computer Science  
Georgia Institute of Technology |  
2022-Present

Bachelor of Engineering, Information  
Technology  
Sardar Patel Institute of Technology |  
2016-2020 | CGPA:9.3/10

HSC  
Thakur Vidya Mandir Junior College |  
2016 | 90.4 %

## Skills

Machine Learning: Python, matlab  
Web Development : HTML, CSS,  
JavaScript  
Database: SQL  
Languages: Java, C, Python

## Certifications

EDHEC Business School  
Introduction to Portfolio Construction  
and Analysis with Python  
Stanford University  
Machine Learning  
deeplearning.ai  
- Neural Networks and Deep Learning  
- Improving Deep Neural Networks  
- Structuring Machine Learning  
Projects  
SCOPE course  
- Data Visualization using Tableau and  
Excel

## Achievements

Smart India Hackathon | 2019  
Got selected for the finale of Smart  
India Hackathon 2019

Indian Judiciary System Competition  
| 2018  
Won the competition by showing  
good presentation skills

## Work Experience

MSCI | Analyst | July 2020 - June 2022

Testing on financial instruments

- Gained a better understanding of financial instruments and tested them on various Performance Attribution and Risk Attribution formulae.

ADO pipelines for regression

- Created and modified ADO pipelines using templates to automate regression.

MSCI | Technical Intern | Jan 2020 - Jun 2020

Identifying regimes to predict market movements

- Researching the efficacy of using the Hidden Markov Model and Deep Learning models to identify regimes in the financial market data.

MSCI index rotation package

- Implemented index rotation strategy over various factors.
- Calculated stats like information coefficient, sharpe ratio to evaluate the strategy.

HFI Intel Calculator

- Implemented HFI calculator to compare the performance of Hedge Fund and ACWI index performance.

## Projects

- August '22 Continual learning with structurally modular neural networks
- Understand the effect of structurally modularity in ANNs as compared to standard ANN structure.
  - Increase / induce modularity into the standard ANN by dropping edges and grouping hidden units with similar outgoing connectivity patterns.
- June '19 Infraction Detection using YOLOv3
- Automated the process of detecting Personal Protection Equipment(PPE).
  - Compared performance of different models like CNN, R-CNN before implementing the system using YOLOv3 model and testing it out on real time video footage.
- Apr '19 Credit Suisse Market Sentiment Indices
- Premised on the idea of analyzing sentiments to collate insights about stock performance.
  - Generated sentiment scores for a particular company, country etc. based on tweets and financial data from the websites.
  - Used an array of data processing techniques like tf-idf, custom tagger and applying the LSTM neural network to classify the data into sentiments.
- Mar '19 TigerAuth (Biometric Based Authentication System) (for SIH 2019)
- Worked on replacing conventional password based login with biometric authentication.
  - Implemented face recognition, liveness detection using opencv and dlib libraries and speaker recognition using mfcc and GMM.
- Dec '18 Portal For Higher Secondary Students
- Created a chatbot which also serves as a doubt solver for higher secondary students.
  - Used algorithms like tf-idf, custom tagger and pagerank for intent identification and summarisation.
  - Used sentiment analysis for monitoring students' emotions.