

# VISHNU TEJA SARDEE

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## EDUCATION

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### **Stony Brook University**

**Stony Brook, NY**

*Master of Science in Applied Mathematics and Statistics (Operations Research), 3.4/4 GPA*

Aug 2021- May 2023

Courses Taken: Mathematical Statistics, Statistical Learning, Computational Geometry, Analysis of Algorithms, Stochastic Models, Simulation and Modelling.

### **Jawaharlal Nehru Technological University**

**Hyderabad, India**

*Bachelor of Technology in Electronics and Computer Engineering, 7/10 GPA*

Aug 2015 - May 2019

Courses Taken: Engineering Mathematics, Electronic Devices and Circuits, Computer Programming, Database Management and Systems, Information Security, Web Technologies, Internet of Things, Big Data Analysis.

## TECHNICAL SKILLS

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- **Computer Programming:** Python, R, MATLAB, MySQL, Java, C/C++, Bash / UNIX command line, SAP ABAP/HANA.
- **Data Analysis / Machine Learning:** Pandas, NumPy, R GLM, Decision Trees, Neural Networks / RNN, SVM, PCA.
- **Industry Tools:** PowerBI, Tableau, MS Excel, Linux, Git, Bitbucket, Jupyter Notebook.

## WORK EXPERIENCE

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### **Stony Brook University**

**Stony Brook, NY**

*Research Assistant - Data Analyst, School of Public Health and Welfare*

March 2023 – May 2023

- Analyzed mental health survey results of SBU graduate students to understand their help seeking behavior and support needed during the COVID-19 pandemic.
- Conducted data cleaning and exploratory analysis on R.
- Developed ML models for variable selection, principal component analysis and logistic regression to determine correlation between various healthcare factors asked in the survey.

### **Accenture**

**Bangalore, India**

*Application Development Analyst- SAP Finance and Controlling team*

Jun 2019 – Jul 2021

- Maintained financial/accounting records of an MNC in SAP systems.
- Resolved IT service request tickets, adhering to service level agreement (SLA), and gathered stats that showed KPI's about team performance for internal review purposes and to ensure compliance to SLA.
- Collaborated with clients and other internal teams to solve various business issues, including system updates.
- Monitored crucial systems, transactions and facilitated system transfers (quality to production) to ensure smooth business functioning under time constraint. Raised immediate alarms upon detection of certain failures, thus reducing any potential financial losses.
- Analyzed and updated cost center / profit center accounting tables to coordinate actual and fiscal year planning.

## PROJECTS

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### **Bank Loan Status Prediction using Machine Learning:**

April 2023 – May 2023

- Implemented machine learning algorithms to classify bank loans (approved/rejected) using a dataset from Kaggle.
- Developed Decision Tree / Random Forrest, Support Vector Machine (SVM) and Neural Network models.
- Optimized best parameters using cross-validation to improve predictions and compared the results across the models.

### **Financial Modeling of Stock Option Prices:**

March 2023 – present

- Modeled stock prices on Geometric Brownian Motion and simulated call option prices using “Monte Carlo” method. Compared results with the Black-Scholes model.
- Analyzed implied volatility levels and Option Greeks. Working on a strategy analyzer that calculates profit and loss at expiration for different underlying stock prices.
- Utilizing RNN and GARCH model to forecast market volatility and estimate option prices.

### **Quantitative Risk Management:**

May 2023 – present

- Developing a tool to analyze Value at Risk (VaR) for a portfolio of financial assets.
- Conducting backtesting to compare model performance with historical data.