

# SHISHIR AGARWAL

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## Education

### Vellore Institute of Technology, Bhopal

B.Tech in Computer Science and Engineering — CGPA: 8.82

Aug 2022 – Present

Bhopal, India

### City Montessori School, Lucknow

ISC Class 12th — Percentage: 94%

July 2022

Lucknow, India

### City Montessori School, Lucknow

ICSE Class 10th — Percentage: 96.33%

July 2020

Lucknow, India

## Technical Skills

**Languages:** Java, C/C++, Python, SQL, HTM, CSS

**Frameworks:** Pandas, Matplotlib, Tensorflow, Keras, NLTK, MySQL

**Tools:** Tableau, Google Cloud Platform(GCP), Amazon Web Services(AWS)

**Core CS Skills:** Data Structures and Algorithms, Database Management Systems, Computer Networking, Machine Learning, Cloud Computing, Data Analytics, Database Management

**Soft Skills:** Leadership, Collaboration, Communication, Teamwork, Team Building, Problem Solving, Strong Ownership

## Projects

### Credit Card Fraud Detection | Python, Scikit-Learn, Pandas, NumPy | GitHub

July 2024

- Developed a novel hybrid model incorporating an Isolation Forest for anomaly scoring and an Autoencoder for feature engineering, which enhanced the predictive power of a Random Forest classifier.
- Achieved a superior F1-Score of 0.874, Precision Score of 0.944 and a Matthews Correlation Coefficient of 0.876 with the proposed model, outperforming all other implemented baseline models in identifying fraudulent transactions.
- Enhanced model performance by 22.8% in F1-Score and 21.1% in MCC over the Gradient Boosting Classifier, while significantly outperforming other baseline models like Logistic Regression and Decision Trees.

### Automated Chatbot for Indian Income Tax Queries | Python, NLTK, scikit-learn, TensorFlow, JSON | GitHub

Aug 2024

- Developed and trained a deep learning chatbot using Python, Keras, and NLTK to provide instant responses to Indian Income Tax Return (ITR) queries.
- Engineered a text preprocessing pipeline for intent recognition, featuring tokenization, lemmatization, and Bag-of-Words (BoW) vectorization to prepare data for the neural network.
- Constructed and trained a sequential neural network using TensorFlow with Dense and Dropout layers for accurate intent classification, optimizing with Stochastic Gradient Descent (SGD).
- Implemented a context management system to handle conversational flow, enabling the chatbot to provide personalized ITR form recommendations based on user employment type.

## Certifications & Achievements

### Cloud Computing (IIT Kharagpur)

May 2024

- Achieved Top 5% Topper Badge with a Silver Elite Certificate.

### Machine Learning Specialization (Stanford Online, DeepLearning.AI)

July 2024 – Sept 2024

- Supervised Machine Learning: Regression and Classification by Stanford Online.
- Advanced Learning Algorithms by Stanford Online.
- Unsupervised Learning, Recommenders, Reinforcement Learning

### Google Cloud Digital Cloud Leader Certified

Aug 2024

Solved more than 250 DSA problems on LeetCode and GFG

Obtained the SQL 50 Badge on LeetCode

## Leadership and Involvement

### India Space Lab

June 2025 – July 2025

Space Tech Intern

Remote

- Currently undergoing a nationally competitive training program in Space Technology after qualifying a merit-based entrance exam.
- Receiving hands-on training across verticals including Drone Technology (Air Taxi), CanSat/CubeSat development, Rocketry, Remote Sensing (GIS), Astronomy, and Space Entrepreneurship.
- Engaged in a live technical project simulating real-world space applications and official workflows.

### FinTech Club

Jan 2024 – Oct 2024

President

VIT Bhopal

- Led a team of 70 members, organizing and overseeing all club activities, meetings, and events.
- Successfully conducted major events like FinGenAI Hackathon, StockQuest, and CodeQuest Finanza.
- Directed the development of multiple software projects, enhancing the club's technical capabilities

## Extracurricular Activities

### GeeksforGeeks Student Chapter - Core Member

2023

- Managed and created content for various occasions and events.