

# SELVA ADHITYAS C

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## Education

### HSC

K.V.M.HIGHER SECONDARY SCHOOL

HSC:86.5%

### M.Sc Decision and Computing Sciences

Coimbatore Institute of Technology

GPA:7.1

2023 – present  
Coimbatore, India

## Experience

Completed a virtual experience program with Accenture via Forage, focusing on data visualization and business insights. Practiced real-world tasks such as designing dashboards, analyzing KPIs, and presenting data-driven recommendations..

JUNE 2025 –JULY2025

## Interests

Full Stack Development | Database Management | Logical Coding |

## Projects

### S&P 500 Stock Prediction and Analysis

**Tools & Technologies:** Python, Pandas, NumPy, Scikit-learn, Seaborn, Matplotlib, Statsmodels, SciPy, yFinance

Built a machine learning pipeline to forecast stock prices using regression and time series models (e.g., ARIMA).

Applied PCA and clustering techniques to reduce dimensionality and group similar-performing stocks.

Used non-parametric hypothesis testing (Mann-Whitney U, Wilcoxon) to compare stock performance trends across time periods.

Evaluated models using  $R^2$ , RMSE, and MAE metrics

Implemented automated pipelines for model training and evaluation

### Ambulance Routing System using Graph Algorithms

**Tools & Technologies:** Python, NetworkX, Flask, HTML, CSS, JavaScript, Bootstrap, Graph Theory Algorithms

Collected and mapped Coimbatore city road data into a weighted graph structure.-Implemented Dijkstra's algorithm to compute the shortest path between emergency points and hospitals.

Visualized routes with color-coded paths using HTML/CSS and embedded map simulations.

Built backend logic using Flask to handle routing requests and return optimal paths in real-time.

Ensured modular code design to allow easy extension into mobile or GPS-integrated applications.

Tested algorithm performance under various network sizes to ensure scalability and low latency.

Improved public emergency response decision-making by reducing arrival time through optimized routing.

### Lung Disease Prediction using Logistic Regression

**Tools & Technologies:** Python, Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, Streamlit (optional for UI)

Collected and preprocessed medical dataset containing patient attributes such as age, smoking history, cough frequency, and shortness of breath.

Applied Logistic Regression to classify whether a patient is at risk of lung disease based on input features.

Performed exploratory data analysis to understand feature distributions and correlations.

Handled missing values, normalized numerical data, and encoded categorical variables.

Evaluated model performance using confusion matrix, accuracy, precision, recall, and ROC-AUC score.

Visualized data and model metrics using bar plots, histograms, and ROC curves.

Built an interactive user interface to input patient details and display prediction results

Improved model accuracy through feature selection and hyperparameter tuning

## Skills

- **Database:** MySQL, Oracle
- **Languages:** Python, Java, SQL, Javascript, HTML
- **Developer Tools:** VS Code, Jupyter Notebook
- **Soft Skills:** Flexed, Collaborated, Scheduled efficiently, Coordinated tasks

## Certifications

- **Hackerrank:** [Python Basics](#), [SQL Basics](#), [Problem Solving Basics](#)
- **Coursera:** Search Engine Optimization (SEO) with Squarespace
- **Great Learning:** Principles of Management