

# IRFAN AGRIYA

## STUDENT

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## EDUCATION

<b>Atria University</b> B. tech Digital Transformation	Bangalore, Karnataka Nov 2021 - Jun 2025
<b>Rewachand Bhojwani Academy</b> High School	Pune, Maharashtra Sep 2019 - Jun 2021
<b>iTeach SVT</b> Secondary School	Pune, Maharashtra Jun 2019

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## SKILLS

**Python:** NumPy, Pandas, Scikit-learn, Matplotlib, Django, Flask, TensorFlow and Turtle

**Data Analysis :** Data Collection, Data Analysis, Data Visualization, R Programming and MySQL

**Web Development:** Django, Flask, HTML and CSS

**Arduino IDE:** C/C++ programming, Basic electronics knowledge, Interfacing with sensors and actuators, Circuit design

**Machine Learning:** Python, TensorFlow, scikit-learn, Keras, Pandas, NumPy, OpenCV, Matplotlib, Seaborn, SVM, Naïve Bayes, Decision Forest, and kNN Classifiers.

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## PROJECTS

### Python Projects

#### *Plant Evolution*

- Developed interactive code for plant evolution game
- Facilitated understanding of evolution
- Gave users control over plant growth and allow for endless play
- Motivated by an interest in plant evolution observed in biology coursework.

#### *Vaccine Record Management System*

- Developed a Vaccine Record Management System for a Pediatric Clinic with user-friendly features
- Included search and sort functionalities to help users find information easily
- Implemented mobile alerts for vaccination dates and appointment reminder emails to keep patients informed
- Stored patient information in a database for easy access and management
- Designed a sleek and easy-to-use Graphical User Interface (GUI) for seamless operation.

#### *Namma Metro*

- Developed the Namma Metro Routing and Pricing System for an efficient and user-friendly travel experience.
- Utilized four linear data structures to provide accurate information for passengers.
- Designed a Graphical User Interface (GUI) to input Boarding and Destination Points.
- Provided the shortest route, number of stops, and cost of the ticket for the journey on the Green and Purple lines.

#### *Home Beyond*

- Developed a hotel booking website with HTML, CSS, Python libraries, and MySQL database, featuring user-friendly interface, secure login/registration, search/filter options, booking/payment system, Google Maps integration, email confirmation, admin panel, and responsive design.

### ***Friend suggestion***

- Developed an algorithm for a social media app to suggest friendships based on common connections.
- Calculated the probability of suggesting a friendship using a minimum number of common connections within a specified distance.
- Utilized Dijkstra's shortest-path algorithm for the project.
- Developed a user-friendly interface to optimize the app's user experience.
- Aimed to improve the app's functionality by suggesting relevant friendships based on proximity of common connections.

## **Data Visualization and Analysis Projects**

### ***Zone prediction in PUBG mobile***

- Conducted a study on Zone prediction in PUBG mobile.
- Analyzed data from 100 competitive matches played by professional players at national and international levels.
- Tested the hypothesis that the zone in PUBG does not randomly shift and shrink.

### ***Horticulture Data (R project)***

- Executed a project to showcase over 120 horticulture tables from "2018 Horticulture Statistics".
- Designed the project to present data in an informative and engaging way.
- Conveyed key insights and statistics from the tables to the audience effectively.

### ***Analyzing Data (R project)***

- Conducted data visualization using R on datasets from Kaggle on Chess and Anime.
- Analyzed and presented data in an understandable and clear manner.
- Provided an insightful and interesting overview of the two topics.
- Aimed to make the data more accessible to a broad audience.

## **Machine learning Project**

- Utilized the MNIST dataset to fit machine learning models, including SVM, Naive Bayes, Decision Forest, and kNN.
- Compared models on raw and preprocessed data and performed various preprocessing tasks.
- Calculated Normal and Bernoulli distribution parameters, Naive Bayes predictions, Support Vector Machine and decision tree training.
- Aimed to explore machine learning algorithms and improve accuracy with preprocessing techniques.

## **IoT Projects**

### ***Thermostat (Edge Vs. Cloud Computing)***

- Conducted a study on Zone prediction in PUBG mobile.
- Analyzed data from 100 competitive matches played by professional players at national and international levels.
- Tested the hypothesis that the zone in PUBG does not randomly shift and shrink.

### ***Robotic Arm***

- Created a robotic arm using Arduino Uno, servo motors, and joysticks to automate camera movements for virtual reality-based production in the entertainment industry.

### ***People in the Room***

- Designed a sensing system using ultrasonic sensors and Arduino Uno to accurately count the number of people inside a room at the main entrance.

### ***Large Scale Kinetic Sculpture- Motorised March***

- Developed a large-scale kinetic sculpture named "Motorised March" to depict a society where people react differently to beliefs, ideas, and politicians. The sculpture's movements were facilitated by servo motors, and an Arduino Uno and LDR sensors were used to control the sculpture's components.