

# Shubham Yadav

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## EDUCATION

### VELLORE INSTITUTE OF TECHNOLOGY

(MAY 2023 - MAY 2027)

Currently pursuing - Third Year B.Tech student in CSE(specialization in AIML)

CGPA: 7.04

## EXPERIENCE

### Outlier Freelancer

(June 2025 – Present)

(Remote)

- Built scalable and optimized solutions using C++ and Python for prompt engineering, code generation, and algorithm validation tasks.
- Worked on automating complex assessment workflows using applied ML techniques such as feature engineering, model evaluation, and problem-specific reasoning.
- Consistently ranked among top performers for delivering high-accuracy, production-quality outputs under rapid turnaround cycles.

### India Space Lab Internship

(DEC 2024 – JAN 2025)

(Remote)

- Interdisciplinary Focus: Combines space innovation, drone technology, and AI.
- Space Entrepreneurship: Explore opportunities in the space industry.
- Drone Systems Development: Assist in building advanced drone technologies.
- Developed AI-driven satellite solutions with optimized performance and reliability.
- Hands-On Technical Work: Engage in development, analysis, and engineering.

## PROJECTS

### [Heart Disease Prediction](#)

- Analyzed & preprocessed UCI Heart Disease dataset to identify key patterns.
- Implemented classification models (Logistic Regression, SVM, Random Forest, etc.) for prediction.
- Compared model performance using accuracy, precision, recall, and F1-score.
- Optimized feature selection & hyperparameters for better prediction accuracy 91%.

### [PAN Number Extraction](#)

- Automated PAN Extraction using Tesseract OCR & OpenCV.
- Image Preprocessing with grayscale, thresholding, and morphology for accuracy.
- Regex Filtering to validate and extract correct PAN numbers.
- Excel Integration for structured data storage using pandas.

### [Trie Search](#)

- Implemented word search, insertion, and autocomplete with optimized  $O(\text{word\_length})$  time complexity.
- Designed Trie-based data structure for efficient text retrieval and minimal space usage.
- Added word suggestion & completion for enhanced search functionality.
- Planned GUI integration & ranked autocomplete for improved usability.

### [Appointment System](#)

- Built patient & doctor portals with profile management, appointment booking, and history tracking.
- Implemented secure authentication using JWT & role-based access control for data privacy.
- Optimized real-time scheduling with appointment search, booking, rescheduling, and notifications.
- Designed a responsive UI using React.js, Redux, Ant Design, and Bootstrap for enhanced user experience.

## SKILLS

- Programming Languages:** C++, Python, Java, OOP (Object-Oriented Programming).
- Cloud & DevOps:** Microsoft Azure, AWS, Figma, TensorFlow, Embedded Systems, Test Automation.
- Web Development & UI/UX:** HTML/CSS, JavaScript, React, SQL, MYSQL, UX/UI Principles, Distributed Systems.
- Software Development:** Data Structures & Algorithms, System Design, Machine Learning, NLP, API Development.
- Tools & Other skills:** Unix/Linux, Git, Technical communication, Teamwork, Fluent in English, Technical Writing.

## CERTIFICATIONS/ACHIEVEMENTS/ADDITIONAL

- [Coursera](#) Applied Machine Learning in Python.
- [Coursera](#) Supervised Machine Learning : Regression and Classification.
- Solved 200+ Data Structures & Algorithms problems on LeetCode.
- Participation: Adobe India Hackathon - Round 1 Qualified, Flipkart Grid - Round 1 Qualified.