

Prajwal B N

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EDUCATION

Rajarajeswari College of Engineering

Bachelor of Engineering in Information Science and Engineering
CGPA: 8.56

Bengaluru, IN
Nov 2022 – May 2026

BGS PU College

Science PCMC
Percentage: 81.66

Gauribidanur, IN
May 2020 - Mar 2022

Sree Ramakrishna Sharadadevi Vidyamandira School

10th ICSE
Percentage: 74.2

Gauribidanur, IN
Mar 2020

EXPERIENCE

Hindustan Aeronautics Limited (HAL)(Internship) | *Frontend*: React, JavaScript, *Tailwind CSS*, *Axios*

Bengaluru, IN

Backend: Python, Flask, *SQLite*, *Flask-JWT-Extended*, *OpenCV*, *PyTorch*, *YOLOv8*

Sep 2025 – Nov 2025

- Engineered an AI-powered Drone Surveillance System with real-time object detection using YOLOv8 and OpenCV, achieving ~90% detection accuracy across live video streams.
- Built 5+ full-stack features including real-time video streaming, geo-fencing, intrusion alerts, and an AI analytics dashboard, streamlining surveillance operations by ~50%.
- Delivered PDF/CSV reporting, heatmap visualization, object detection logs, and JWT-based authentication, enabling secure multi-role access for 10+ system users.
- Optimized the Flask-based backend for low-resource environments, reducing average API response time by ~30%, and authored comprehensive production-ready deployment documentation.

PROJECTS

Sanjeevani - Medical Healthcare | *Frontend*: React.js, CSS3, Chart.js, Three.js, Web Speech API

May 2025

Backend: Python, FastAPI, JWT, Geolocation services, Twilio, JSON

- Built a secure full-stack healthcare platform enabling seamless medical record exchange between hospitals and patients, with end-to-end data encryption serving 200+ user sessions in internal testing.
- Integrated GPS tracking of ambulances and Twilio alerts to reduce emergency response times by 40%.
- Processed 5,000+ medical records using the FastAPI framework to optimize data workflow.

Agropro - AI - Powered Smart Agricultural Advisory Platform | *Flask*, *SQLite*, *HTML/CSS/JS*, *PyTorch*, *Scikit-learn*,

ResNet architecture, *Weather APIs*, *SQLite*, *Pandas*, *NumPy*

June 2025

- Developed an AI-powered agricultural advisory platform delivering personalized crop, fertilizer, yield, price, and disease recommendations across 8+ crop varieties in 3 regional languages (English, Kannada, Hindi).
- Architected a full-stack platform integrating Random Forest, XGBoost, and ResNet-based CNN models with real-time weather APIs, achieving ~94.2% crop recommendation accuracy with multilingual support.
- Implemented 10+ smart farm management features including irrigation planning, pest alerts, expense tracking, farm calendar, price monitoring, government scheme notifications, and a farmer community forum with real-time alerts.

CERTIFICATIONS

Web Development Fundamentals | IBM SkillsBuild

Mar 2025

Geodata Processing using Python and Machine Learning | IIRS Outreach Programme, ISRO

April 2025

SENTINEL HACK 5.0 | K.S. Institute of Technology

April 2025

SKILLS

Programming Languages: Java, Python, JavaScript (ES6+), C++, SQL, HTML5, CSS3

Frameworks & Backend: Flask, FastAPI, Django, Node.js, Express.js

Frontend & Visualization: React.js, Bootstrap, Chart.js, Three.js

Databases: MySQL, MongoDB

Cloud & DevOps: Render, Git, GitHub

Machine Learning & AI: PyTorch, Scikit-learn, Pandas, NumPy, SciPy, JAX

Data Analysis & Visualization: Matplotlib, Seaborn, Data Cleaning, Statistical Modeling

Achievements

Secured 1st prize at Department Project Expo and KSCST funding (₹4,000) for Agropro - AI - Powered Smart Agricultural Advisory Platform (2025-2026)