

# Prasanna RDL

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## Education

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<b>B.Tech, Computer Science Engineering</b> , GITAM University ( <b>Grade: 8.73 CGPA</b> )	2023 – 2027
<b>Senior Secondary (XII)</b> , Ascent Junior College ( <b>Grade: 86%</b> )	2023
<b>Secondary (X)</b> , Bethany School ( <b>Grade: 85%</b> )	2021

## Experience

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**AI/ML Intern — Avalanche Labs** Aug 2025 – Oct 2025

- Architected a real-time traffic analysis pipeline, integrating OpenCV deep learning models to process live video feeds at 100+ frames/minute.
- Engineered a dynamic signal optimization engine that calculated vehicle density and adjusted light timings, reducing intersection delays by 20–30%.
- Built end-to-end data workflows to manage real-time video ingestion, model inference, and actionable metrics generation.

## Projects

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**Finance Dashboard System** Mar 2026 – Apr 2026

- Engineered a full-stack finance platform with multi-tier role-based access control (RBAC) using Node.js, Express, and PostgreSQL.
- Developed 10+ REST APIs for financial data workflows, complex filtering, and real-time dashboard analytics.
- Implemented custom JWT middleware to securely enforce authorization and route protection across all endpoints.
- Integrated backend services with a dynamic frontend UI and deployed the application via Render.

**Smart Air Monitor** Mar 2026

- Architected a real-time data pipeline streaming live IoT sensor metrics into a Supabase (PostgreSQL) database.
- Developed a predictive FastAPI backend serving a Random Forest ML model ( $R^2 = 0.97$ ) for air quality forecasting.
- Built and deployed a responsive React dashboard on Vercel to visualize live environmental trends.

**Dark Sky Finder** Dec 2025 – Jan 2026

- Engineered a full-stack geospatial app (React, Express) integrating live AQI and weather APIs.
- Designed a multi-variable scoring algorithm to rank locations based on light pollution and atmospheric data.
- Integrated Gemini 2.0 Flash for conversational AI and built an interactive Leaflet map for spatial search.

## Skills

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- **Languages:** Python, JavaScript, Java, C
  - **Frontend:** React.js, Next.js, Tailwind CSS, HTML, CSS
  - **Backend:** Node.js, Express, FastAPI, REST APIs
  - **Databases:** PostgreSQL (Supabase), MongoDB, MySQL
  - **AI & Machine Learning:** PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, OpenCV, LLM Integration
  - **IoT & Embedded:** ESP32, Arduino IDE, UART, Sensor Integration (MQ135, DHT22)
  - **Tools & DevOps:** Git, Docker, Swagger, Vercel, Render

## Leadership

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**President — GITAM Aero Astro Club** Present

- Directed different teams of 20+ members to execute 9+ technical workshops, hackathons, and outreach programs.
- Scaled active club participation by 90% through targeted inter-disciplinary project initiatives and technical community building.

**SHORe Fest, GITAM**

- **Technical Member (2026):** Managed technical infrastructure and digital workflows, ensuring zero downtime and seamless execution across flagship events.
- **Recreational Member (2025):** Directed on-ground logistics and cross-functional teams, successfully scaling event operations to support 500+ attendees.

## Additional

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- **Certifications:** Full-Stack (Udemy), Networking (Cisco), Java (Coursera), Python (Internshala)
  - **Hackathons:** Secured Top 5 position at InnovAIthon 2026 (IIT Hyderabad); participated in AP Space Tech Summit 2026 (Vignan University), IdeaSprint 3.0 2026 (GITAM), and TechXcelerate 2025 (BITS Hyderabad), developing AI-based solutions under time constraints.