

# Pranu Pranjali

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## Professional Summary

Final-year B.Tech student at NIT Andhra Pradesh, skilled in full-stack development, DevOps practices, and data-driven problem-solving. Experienced in developing scalable web applications with Node.js, Next.js, React.js, PostgreSQL, MongoDB and Flask, and proficient in CI/CD automation, secure authentication, and cloud-based deployments (AWS, Docker, Kubernetes).

## Experience

**Software Development Intern** at Directorate General of Information Systems (MoD) May 2025 – August 2025

- Built a citation filing system using Node.js, React, PostgreSQL, and Prisma.
- Designed a scoring algorithm based on 3000 input parameters per citation.
- Implemented secure authentication via SAML and SSD-ID signatures.
- Automated deployments using CI/CD for consistent data operations.
- Integrated RAG-based chatbot using Llama 3.1 for automated query resolution.
- Authored CMMI Level 3 documentation maintaining strict SDLC compliance.

**Project Intern** at IIT Dharwad | [View-Certificate](#) May 2024 – July 2024

- Developed a 3D toolpath generation app using Python-OCC, NumPy, and Flask.
- Implemented complex logic in concise FP-style computations (surface normals, vector paths).
- Built interactive 3D visualization with Three.js and Plotly, ensuring seamless UI-UX.
- Deployed scalable web services on Linux VM with Flask + JS frontend.

## Skills

**Technical:** Web Development, DevOps, Data Analysis, DSA, OOPs, Optimization Techniques

**Languages:** Java, Python, JavaScript, TypeScript, SQL, HTML, CSS

**Tools & Frameworks:** Node.js, Express.js, Next.js, React.js, Spring Boot, Flask, FASTAPI, Tailwind CSS, Bootstrap

**Data and Intelligence:** Pandas, NumPy, PostgreSQL, MongoDB, Redis, D3.js, Three.js

**CI/CD:** Git, GitHub, Docker, Kubernetes, Jenkins, SonarQube, AWS (EC2, S3, Elastic Beanstalk), Linux

**Other:** API Design, Secure Auth (SAML/OAuth), Payment Workflows, SDLC Methodologies (Agile, RAD, Spiral)

## Projects

**Generate CAD models using AI** | [GitHub](#) September 2025

- Built an AI-powered application to generate CAD models from user prompts using React.js, FastAPI, Three.js, CodeGemma-7B, CadQuery, and Open Cascade.
- Fine-tuned an AI model on 5k parameters to enhance CAD generation accuracy.
- Integrated Three.js for real-time visualization of generated CAD models on the user dashboard.
- Enabled users to download models in STEP, STL, and tool-path program formats.

**College Placement Portal** | [GitHub](#) August 2025

- Developed a robust placement management portal handling student and recruiter data with Node.js, React.js, PostgreSQL.
- Implemented role-based access control for secure multi-user workflows (students, recruiters, admins).
- Responsive UI with Tailwind CSS.
- Optimized database queries for efficient processing of large datasets.
- Deployed using AWS RDS for Postgres database and Elastic Beanstalk for Node.js backend.

## Education

**National Institute of Technology Andhra Pradesh**, B.Tech November 2022 – May 2026

- Major in Mechanical Engineering | Minor in Software Engineering
- CGPA: 8.13

## Roles and Responsibilities

**Member**, Google Developers Group (GDG) October 2024 – Present

**Joint Secretary**, E-Yantra Club August 2023 – Present