# Nidhi Bandihole Prasanna

**Software Engineering | Data Science | AIML**

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Portfolio:nidhibandihole.github.io

## Professional Summary

Software Engineer with strong knowledge in Python, Java, and full-stack web development, specializing in REST APIs, Flask, and FastAPI. Experienced in developing and deploying scalable applications with expertise in relational and NoSQL databases including Cloud, SQL, and MongoDB. Skilled in designing and implementing AI-powered solutions for sentiment analysis, conversational agents, and data visualization. Adept at building robust systems, integrating APIs, and applying Agile-based, data-driven approaches to solve real-world problems.

## Work Experience

**Software Engineering-AIML Internship, Toyota-Kirloskar Motor** (Mar 2025–May 2025)
**Tech Stack: Python, TensorFlow, HuggingFace, Flask, PowerBI**
- Designed and deployed a sentiment analysis pipeline on 80,000+ customer records, achieving 95% accuracy.
- Built an end-to-end solution with automated cleaning, preprocessing, and EDA, reducing manual effort by 80%.
- Integrated insights into a Flask web interface and Power BI dashboards, collaborating with stakeholders.

## Education

**B.E. in Computer Science and Engineering (Data Science)**
SJB Institute of Technology, 2022–Present                        CGPA: 9.2 (3 years)

## Personal Projects

- **ArogyaAI – Healthcare Agentic AI Platform** (https://arogyaai-7nl7.onrender.com)
  **Tech Stack: Python, FastAPI, Pydantic, MongoDB, Hugging Face Transformers, LLaMA, Render**
  - Led the integration of a fine-tuned ChatDoctor model (LLaMA) into a FastAPI backend, enabling an agentic healthcare assistant for proactive symptom monitoring and patient engagement.
  - Developed the /agent/message endpoint with Pydantic validation, connected the model to MongoDB for persistent, context-aware dialogue, and enforced safety layers for reliable outputs.
  - Collaborated on deployment, debugging, and full-stack architecture, ensuring scalability and practical application of agentic AI in healthcare.
- **Wafer Defect Detection** (https://huggingface.co/spaces/nidhibp/Wafer-Defect-Detection)
  **Tech Stack: Python, PyTorch, ResNet18, OpenCV, NumPy, Gradio, Hugging Face Spaces**
  - Developed an AI-powered wafer defect detection model inspired by semiconductor inspection systems, leveraging CNNs (ResNet18) and image augmentation to classify multi-label defects.
  - Built and deployed an interactive demo enabling real-time wafer image uploads, defect visualization, and class probability outputs.
- **Apartment Association Portal** (https://ihitasouthavenueportal.onrender.com)
  **Tech Stack: Python, Flask, SQLAlchemy, TiDB Cloud, HTML/CSS, GitHub Actions, Render**
  - Developed a full-stack web app for resident management using Flask and TiDB with CI/CD integration for 35+ home-owners. Implemented booking systems, announcements, and admin controls.

## Research & Publications

**Arogya-AI: AI Driven Healthcare Platform for Travel Doctors- Survey**(IJCRT)-View Status

## Technical Skills

**Programming:** Python, C, Java, HTML, JavaScript
**Databases:** SQL, MySQL (TiDB Cloud), MongoDB (NoSQL)
**Core Skills:** Software Engineering, OOP, DSA, DBMS, Agile Collaboration

## Achievements

-Captain, SJBIT Chess Team- Led team to Top 8 at VTU State-level Championship (2022-2024).
-Founding Committee Member, Numinous Tech-Organized hackathons, workshops, coding competitions.