

Vaibhavi Bogaraja Raj

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EXPERIENCE

Software Engineer

Sudeeksha Group of Technologies

June 2024 – March 2025, Bengaluru, India

- Collaborated in the development of a full-scale Hospital Management System using Django, DRF, SQL, Git, and integrated ML models such as One-Class SVM for abnormal billing detection and Random Forest Regressor for pharmacy stock–shortage prediction with automated alerts ensuring reliable and predictable healthcare operations.
- Achieved high performance by optimizing queries, reducing API latency, and implementing efficient caching while delivering secure, scalable REST API modules with enhanced user experience boosting system speed, reliability, and workflow efficiency.

PROJECT

Netflix Power BI Dashboard:

- Built an interactive analytics dashboard using Power BI, integrating EDA insights with KPIs, maps, cards, and optimized visuals to uncover regional, genre, and content-distribution trends.
- Enhanced performance by applying efficient data modeling, responsive filtering, and visual optimization—improving interpretation speed and user decision-making efficiency by 30%.

Loan Default Risk Analysis (Power BI & EDA):

- Developed a comprehensive loan-risk analysis pipeline by performing Python-based EDA and data cleaning, then transforming insights into an interactive Power BI dashboard with KPIs, cards, and trend segmentation.

Price Probe: E-commerce ML Platform:

- Created an AI-driven comparison platform using Python, BeautifulSoup, ML libraries, and Streamlit to analyze real-time product prices across multiple e-commerce websites.

Action Detection for Sign Language using Machine Learning (Computer Vision + ML):

- Developed a real-time sign-language action detection system using Python, OpenCV, Keras, TensorFlow (CNN), and Matplotlib, achieving 92% accuracy on test data.

EDUCATION

Master of Science in Data Analytics

Northeastern University | Boston, MA | 2025-2027(Expected) | 4

Bachelor of Engineering in Artificial Intelligence & Machine Learning

Jyothy Institute of Technology (VTU) | India | 2020 - 2024 | 7.09

CERTIFICATIONS

Advanced Data Science certification | IIITB | 2024 – 2025

INVOLVEMENT

Member & Peer Instructor | Lean in Bangalore Tech Club

Delivered workshops on Data Analytics & Power BI, guided peers in tool usage and project development.

PUBLICATIONS

- Price Probe: E-commerce Platform Using ML ([Conference Paper](#) | IJFMR | 2024)
- Cognitive Object Detection: Deep Learning with Auditory Feedback ([Conference Paper](#) | IEEE-ICWITE | 2024)
- Action Detection for Sign Language Using ML ([Conference Paper](#) | IEEE-NMITCON | 2023)

SKILLS

Programming & ML: Python (ML - Py Torch, scikit-learn, TensorFlow), SQL (Database management), R (basic), HTML, CSS.

Data Analysis & Visualization: Power BI, EDA, Pandas, NumPy, Matplotlib, Seaborn, NLP.

Design Tools: Adobe Photoshop, Krita, Figma, Canva.

Soft skills: Analytical Thinking, Problem Solving, Teamwork, Communication, Research ability.