

Dupesh Nayak

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PROFESSIONAL SUMMARY

Recent graduate with major in **Electronics and Communication** with minor in **AI** and **Computer Vision**, possessing strong foundational skills in **Python**, **Machine Learning**, and **Data Analytics**. Proven ability to leverage technical skills for **Process Automation** and predictive modeling.

SPECIALIZED SKILLS

- **Programming Languages:** Python, HTML, CSS, LaTeX, Streamlit, Node.js, Arduino
- **AI & ML Tools:** PyTorch, CrewAI, NLP, LlamaIndex, Ollama, LLM, Hugging Face, Scikit-learn
- **Automation Tools:** RAG, n8n, CUDA, LangChain, AWS, Azure, GCP, CI/CD pipelines
- **Data Analysis:** SQL, Redis, Tableau, Power BI, Dash, Plotly, Excel
- **Certifications:** Lean Six Sigma Green Belt, Python Fundamentals, C# Programming Basics

PROJECTS

- Improving Fine-tuned model using RAG** **Oct 2024 - Feb 2025**
- Implemented **RAG** to enhance a fine-tuned AI model, improving its accuracy of responses to technical queries by 20%, integrating multiple knowledge bases to provide relevant context for LLM-generated responses.
 - Developed a **vector database** knowledge base and retrieval system, utilizing text embeddings and chunking techniques.
- Customer Survival Analysis using AI and Data Analytics** **Mar 2023 - Jun 2023**
- Leveraged **Data Analytics** practices to perform predictive analysis to estimate the lifetime value and customer churn rate.
 - Built a Random Forest deep learning model with 0.85 ROC-AUC by mitigating class imbalance with weighted modeling.
- E-Commerce Website Automation and Testing using Selenium** **Oct 2022 - Feb 2023**
- Designed test cases for core e-commerce functionalities, e.g., shopping cart, payment gateway, checkout process, etc., using AI agents for accelerated process automation and 20% reduction in testing time.
 - Leveraged **SQL** for validating database data integrity during integration testing, utilized HTML, CSS for Functional Testing.
- Data Visualization Dashboard using Python** **Sep 2022 - Oct 2022**
- Developed a basic interactive data visualization dashboard using Plotly, Dash, and Pandas in Python.
 - Visualized statistical data with multiple charts, enabling easy exploration and analysis of datasets up to 10 MB.

EXPERIENCE AND CERTIFICATIONS

- Industry Training at Vivartan Technologies** - Bengaluru **Jun 2023 - Sept 2024**
- Completed hands-on training on Embedded System, **IoT** and AI, focusing on **device programming** and cloud integration.
 - Completed 5 major projects during training, comprising solving real world problems using embedded system and AI.
- Co-Founder** - Cybersecurity Club - CyberSpace **Jun 2023 - Sept 2024**
- Led industry workshops for over 1,000 participants, focusing on basics of security and white hat hacking.
 - Enhanced skills like team collaboration and soft skills through leadership, aligning with organizational standards.
- Internship at BSNL** - Technical Intern **Jun 2023 - Jul 2023**
- Collaborated with engineering and compliance teams to implement process improvements, automated network diagnostics using scripting, reducing complex troubleshooting time by 30%.
 - Gained hands-on experience in streamlining workflows and prioritizing features for efficient execution.

EDUCATION

- Manipal Institute of Technology, Bengaluru** **Oct 2021 - Aug 2025**
- Bachelor of Technology (B.Tech) in **Electronics and Communication (Artificial Intelligence Minor)** (68%) Bengaluru
- Holy Cross School, Chinmaya** **Jun 2017 - Jul 2021**
- CBSE (Science) with **Physics, Chemistry, Mathematics and Computer Science** (86.5%) Bokaro

INTERESTS

- Contributor of Do Help Foundation and Volunteer Service Organization (VSO), assisting individuals belonging to BPL.
- Lead vocalist for the MIT band, winner of high school volleyball tournament and music competitions.
- Soft Skills: *Problem-solving, Critical Thinking, Time Management, Strategic Planning*