

# 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

<b>Improving Fine-tuned model using RAG</b>	<b>Oct 2024 - Feb 2025</b>
<ul style="list-style-type: none"><li>Implemented <b>RAG</b> 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.</li><li>Developed a <b>vector database</b> knowledge base and retrieval system, utilizing text embeddings and chunking techniques.</li></ul>	
<b>Customer Survival Analysis using AI and Data Analytics</b>	<b>Mar 2023 - Jun 2023</b>
<ul style="list-style-type: none"><li>Leveraged <b>Data Analytics</b> practices to perform predictive analysis to estimate the lifetime value and customer churn rate.</li><li>Built a Random Forest deep learning model with 0.85 ROC-AUC by mitigating class imbalance with weighted modeling.</li></ul>	
<b>E-Commerce Website Automation and Testing using Selenium</b>	<b>Oct 2022 - Feb 2023</b>
<ul style="list-style-type: none"><li>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.</li><li>Leveraged <b>SQL</b> for validating database data integrity during integration testing, utilized HTML, CSS for Functional Testing.</li></ul>	
<b>Data Visualization Dashboard using Python</b>	<b>Sep 2022 - Oct 2022</b>
<ul style="list-style-type: none"><li>Developed a basic interactive data visualization dashboard using Plotly, Dash, and Pandas in Python.</li><li>Visualized statistical data with multiple charts, enabling easy exploration and analysis of datasets up to 10 MB.</li></ul>	

## EXPERIENCE AND CERTIFICATIONS

<b>Industry Training at Vivartan Technologies</b> - Bengaluru	<b>Jun 2023 - Sept 2024</b>
<ul style="list-style-type: none"><li>Completed hands-on training on Embedded System, <b>IoT</b> and AI, focusing on <b>device programming</b> and cloud integration.</li><li>Completed 5 major projects during training, comprising solving real world problems using embedded system and AI.</li></ul>	
<b>Co-Founder</b> - Cybersecurity Club - CyberSpace	<b>Jun 2023 - Sept 2024</b>
<ul style="list-style-type: none"><li>Led industry workshops for over 1,000 participants, focusing on basics of security and white hat hacking.</li><li>Enhanced skills like team collaboration and soft skills through leadership, aligning with organizational standards.</li></ul>	
<b>Internship at BSNL</b> - Technical Intern	<b>Jun 2023 - Jul 2023</b>
<ul style="list-style-type: none"><li>Collaborated with engineering and compliance teams to implement process improvements, automated network diagnostics using scripting, reducing complex troubleshooting time by 30%.</li><li>Gained hands-on experience in streamlining workflows and prioritizing features for efficient execution.</li></ul>	

## EDUCATION

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