

Dhanya Kini Bailoor

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SUMMARY:

AI Engineer with hands-on experience building end-to-end ML pipelines, NLP systems, and AI-powered applications. Proven ability to take projects from problem definition through deployed solution including agentic RAG pipelines, real-time inference systems, and analytical data workflows. Skilled in Python, SQL, and data visualization tools; passionate about applying AI to drive growth and business outcomes for consumer products in fast-paced, cross-functional environments

EDUCATION:

- **M.S. in Artificial Intelligence (2026-Present)** - Northeastern University, Boston, USA
 - **B.E. in Artificial Intelligence & Machine Learning (2025)** - CGPA: **8.5/10** - Visveswaraya Technological University, India
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TECHNICAL KNOWLEDGE

Languages:	HTML, CSS, JavaScript, Python, Swift, C, C++, Java
AI / ML	LLMs, RAG, Prompt Engineering, NLP, Computer Vision, Agentic pipeline design
Data & Visualization	Tableau, Power BI, Pandas, NumPy, Plotly, Matplotlib, Seaborn, Flask Dashboards
Databases:	MySQL, PostgreSQL, Microsoft SQL Server
Frameworks & Tools:	LangChain, FastAPI, Flask, Django, OpenCV, Gradio, ONNX, Qt Creator
Certifications:	iOS App Development Bootcamp, Data Manipulation in Python, Machine Learning for Data Science

WORK EXPERIENCE:

- 1. Data Patterns (India) Limited, Chennai, India - Internship Trainee** **July 2025 – Nov 2025**
 - Scoped and evaluated Whisper (speech-to-text) for feasibility in a legacy C++/Qt enterprise system; documented performance trade-offs and reduced inference latency by ~25%, communicating status and recommendations to senior stakeholders throughout
 - Owned end-to-end product design and delivery of a YOLO image detection pipeline from Python model training and ONNX export to C++/Qt inference integrating modern AI innovation into production enterprise infrastructure
 - Conducted rigorous testing across pipeline stages to validate output quality before deployment; translated technical findings into clear reports for cross-functional business stakeholders
 - *Tech: Python, C++, Qt Creator, ONNX, Machine Learning*
 - 2. Manipal Technologies Limited, Udupi, India - Machine Learning Intern** **Feb 2025 – May 2025**
 - Built an offline NLP keyword extraction pipeline for Udayavani, a consumer-facing Kannada news platform; trained on 10,000 articles and tested on 5,000 to drive SEO growth in a competitive digital media market
 - Identified analytical gaps in extracted outputs and iterated on model parameters to improve keyword relevance, delivering clear recommendations to the product team on pipeline improvements
 - Optimized business processes around article URL generation and data privacy, enabling the tool to scale across the platform's full content library
 - *Tech: Python, NLP, Machine Learning*
 - 3. OptM Media Solutions Private Limited, Bangalore, India - Data Science Intern** **Nov 2023**
 - Performed analytical exploration of messy real-world modem performance datasets, surfacing actionable patterns in packet loss, signal quality, and network metrics using data visualization tools
 - Communicated findings through structured reports that directly informed product and engineering decision-making
 - *Tech: Python, Pandas, NumPy, Matplotlib, Seaborn*
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PROJECTS:

- 1. QueryPDF: PDF Automation**
 - Built an end-to-end agentic workflow using LangChain and LLaMA 3 with a RAG architecture, enabling intelligent document querying, summarization, and context-aware Q&A a prototype designed to automate high-friction business processes around document review
 - Designed, tested, and iterated on prompts and chunking strategies to optimize retrieval quality; maintained the full data pipeline from ingestion through vector storage and LLM response generation
 - Deployed a Gradio-based interface for consumer-friendly, non-technical access; optimized for local offline execution to preserve document privacy
 - Demonstrates: prompt engineering, agentic workflow design, LLM pipeline ownership, analytics automation
- 2. Traffic Prediction Using YOLO**
 - Built a real-time vehicle detection and traffic congestion prediction system using YOLOv8 and OpenCV, processing live video streams frame-by-frame to support data-driven market analysis of urban traffic patterns
 - Trained and tested a Random Forest Classifier on labeled traffic data; integrated the model into a Flask backend to generate live congestion predictions and surface analytical recommendations
 - Developed an interactive Plotly choropleth data visualization tool and deployed the full pipeline as a browser-accessible product, connecting inference, prediction, and visualization in one system
 - Demonstrates: end-to-end analytics product development, data visualization tools, dashboard communication
- 3. Ident AI: Object Detection App**
 - Developed a consumer-facing Swift iOS app integrating Core ML and Vision frameworks for real-time image classification using MobileNetV2; designed with a clean UI for intuitive consumer interaction
 - Structured the codebase for innovation and extensibility, enabling straightforward model swap-in; displayed confidence scores in real time for interpretable, actionable output