

# P Pratheeka Ganapathi

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## SUMMARY

Full-stack and ML engineer specializing in production-grade LLM pipelines from multimodal document extraction and orchestration to asynchronous job infrastructure and custom evaluation frameworks. Experienced deploying both frontier APIs and local inference on resource-constrained GPU hardware, with end-to-end ownership across architecture, implementation, and benchmarking. 1+ years of professional experience spanning founder's office, marketing analytics, and 0-to-1 startup operations.

## PROJECTS

### Advanced Content Summarizer | *FastAPI, React, Docker, Qwen 2.5, MiniCPM-V, Claude, Gemini* **In Progress (Apr 2026 – Present)**

- Architecting a full-stack pipeline that converts PDFs, images, or text into laid-out PDFs with context-aware summaries and actionable next-step CTAs.
- Designed a dual-LLM flow with unique-ID image preservation: PyMuPDF + PaddleOCR + MiniCPM-V → Qwen 2.5 → Claude (CTA/layout) → Gemini (image regions) → WeasyPrint, at ~\$0.05–\$0.15 per document.
- Engineered an async job layer (FastAPI + Dramatiq + Redis + SSE) with sequential GPU swaps fitting MiniCPM-V and Qwen 2.5 on a single 12GB RTX 2060; deployed via Docker Compose, Traefik, and NVIDIA Container Toolkit.

### PDF-to-Speech Reader | *FastAPI, React, Docker, Gemini 2.5 Flash, Kokoro-82M, PyTorch* **Mar 2026**

- Built a containerized full-stack app converting PDF books to natural audio, using LLM-based cleaning to filter headers, footers, page numbers, and watermarks.
- Designed a 3-stage NLP pipeline (PyMuPDF → Gemini 2.5 Flash → Kokoro-82M) with a "DELETE-instruction" prompt cutting Gemini output tokens by ~78% (~\$0.015 per 256-page book).
- Built a custom 7-metric benchmarking framework with a React dashboard; tested 3 approaches (PyMuPDF-only, Gemini → PyMuPDF, Gemini-only) across 17 runs to converge on F1 = 1.0 and 81.2% System Health.

## SKILLS

**Languages:** Python, SQL, JavaScript, C

**ML & Data:** PyTorch, scikit-learn, NumPy, Pandas, Matplotlib, Pillow, TensorFlow

**AI Concepts:** NLP, Computer Vision, Multimodal AI, Prompt Engineering, Inference Pipelines, Model Evaluation (F1, Precision, Recall, WER), Data Preprocessing

**Backend & Full-Stack:** FastAPI, React.js, PostgreSQL, Dramatiq, Redis, Server-Sent Events

**DevOps & Tools:** Docker, Docker Compose, Traefik, NVIDIA Container Toolkit, Git, GitHub, Jupyter, Google Colab

## EXPERIENCE

### Wireone Labs Pvt Ltd, *Remote* **Dec 2025 – Feb 2026**

*Founder's Office Intern*

- Owned end-to-end product QA for an early-stage SaaS platform, executing systematic testing cycles and data-validation workflows that surfaced pre-release issues before each rollout.
- Authored SaaS user documentation, how-to guides, and onboarding flows; set up ClickUp workflow automation and contributed to founder-facing pitch materials.

### Maker Zone (Early-Stage Startup), *Bengaluru, Karnataka* **Aug 2025 – Nov 2025**

*Operations Intern*

- Managed Amazon product catalog and listings pipeline including ongoing keyword research and performance tracking; coordinated with suppliers and supported founder-level decisions with data-driven insights in a 0-to-1 startup environment.

### HiveMinds Innovative Market Solutions Pvt Ltd, *Bengaluru, Karnataka* **Jan 2025 – May 2025**

*Digital Data Analyst*

- Analyzed large-scale marketing campaign datasets using Python and SQL to extract insights on audience segmentation, behavior trends, and KPI performance.
- Built interactive dashboards to monitor ROI and translated ambiguous business questions into structured data analyses that drove decisions across marketing and product teams.

### ME-RIISE Foundation (Section 8 Company), *Hassan, Karnataka* **Feb 2022 – May 2025**

*Executive Lead (prev. Startup & Research Lead)*

- Appointed State-Level Event Coordinator for three consecutive years (2022–2024); led a 30-member cross-functional team across technology, design, and operations verticals.
- Drove digital strategy and supported early-stage student startups through mentorship, resource allocation, and industry partnerships.

## EDUCATION

**Malnad College of Engineering, *Hassan, Karnataka***

*Bachelor of Engineering in Information Science and Engineering*

**Dec 2021 – June 2025**

*CGPA: 9.28 / 10.0*