Anoopchandra Parampalli

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Professional Summary:

Graduate student in Applied Machine Intelligence with a 3.86 GPA and hands-on experience delivering end-to-end AI/ML solutions. Skilled in Python, PyTorch, cloud deployment, and full-stack development. Passionate about building reliable, production-grade models and APIs.

Education

Northeastern University, Boston, MA Expected July 2025
MS in Applied Machine Intelligence
NMAM Institute of Technology, Nitte, Karnataka, India November 2022
B.E. in Electronics and Communications

Internships:

AI Engineer Intern, Legalrescue.ai (Remote) Apr 2025 - Present

- Architected and built a horizontally scalable FastAPI backend with Redis (Elasticache) and Postgres (RDS) on AWS EKS, achieving <**1**s latency and **99%+** uptime.
- Developed async LLM pipelines for speech-to-text, classification, and autofill, with Celery background summaries.
- Engineered robust Redis session management enabling seamless autoscaling (**1–100** pods), failover, and zero session loss.
- Built a Next.js frontend wizard with voice/text intake, step-by-step review and editing, secure Google OAuth2 login, and persistent user session history.
- Automated Docker/Kubernetes deployment and CI/CD with GitHub Actions and AWS monitoring.

Data Analyst Intern, J Healthcare Initiative (Remote) Jan 2025 - Mar 2025

- Analyzed **25k+** state/national overdose records; built **3** Tableau dashboards visualizing trends across **10+** counties.
- Proposed a data-driven intervention roadmap projected to increase outreach effectiveness by **20%.**

Projects

Audio Genre Classification (Transformer + FastAPI + React):

- Processed FMA-Small (8k 30 s clips) into log-mel spectrograms (Librosa).
- Achieved **85%** test accuracy with a PyTorch Transformer; used SpecAugment (**+12% regularization**) and AMP (**+50% speed**).
- Served inference via Dockerized FastAPI on AWS Elastic Beanstalk; **100+ daily requests.**
- Built React.js SPA, hosted on S3 + CloudFront with ACM SSL for audioclassifier.cc.

Retrieval-Augmented Generation (RAG) Model for Pandas Library Documentation Querying:

- Implemented ingest & retrieval over **3k-page** Pandas docs using sentence-transformers & FAISS.
- Achieved **90% answer relevance**; added guardrails to enforce API usage constraints.
- Exposed REST endpoint (/query) with FastAPI.

Chain-of-Thought LLM for Stock Price Movement Predictions

- Collaborated with a cross-functional team to ingest and process financial data from multiple APIs, storing in MongoDB time-series collections.
- Experimented with different chain-of-thought lengths for GenAI-driven predictive modeling, achieving **20%** improved accuracy on short-term price trends.
- Integrated automated scripts to transform data, generate textual prompts, and monitor net profit outcomes for recommended trades, increasing productivity by **50%.**

Skills

- Programming: Python, SQL, C++, React.js, Bash
- AI/ML & Data: PyTorch, TensorFlow, Scikit-learn, Hugging Face, Explainable AI, GenAI
- Cloud & Devops: AWS (S3, Cloudfront, Beanstalk, ACM, EKS), Docker, Kubernetes, CI/CD, FastAPI
- Big Data & Databases: Pyspark, Hadoop, MongoDB, PostgreSQL, Redis, FAISS
- BI & Data Visualization: Tableau, Matplotlib, Seaborn, Plotly, Folium