

# Adithya Narayan

adithyanarayanb@gmail.com | Canadian Citizen | adinarayanb.github.io | Toronto, ON

## Education

---

**Northeastern University - Khoury College of Computer Sciences** – Boston, MA

Master of Science in Computer Science, May 2024

**Ramaiah Institute of Technology** – Bangalore, India

Bachelor of Engineering in Information Science, June 2020

## Experience

---

**SDE**, Bear Brown LLC – Boston, MA

July 2024 – Present

- Improved response relevancy by 50% by deploying an end-to-end RAG (Retrieval Augmented Generation) LLM using Transformer embeddings obtained from over 1,000 NGO-related FAQ PDFs using ETL pipelines.
- Reduced average query handling time by over 70% by deploying fine-tuned LLM into production as a secure, scalable chatbot using OAuth2, React, AWS, and Flask, and implementing response caching using Redis.
- Ensured 99%+ test coverage by setting up automated CI/CD pipelines with GitHub Actions and PyTest.

**Software Engineer**, Skit – Bangalore, Karnataka, India

Dec 2021 – Aug 2022

- Used Kubeflow to build pipelines for speech recognition model benchmarking, enabling data scientists to test their models in a matter of hours instead of days
- Developed a Cobra CLI tool using Go Routines to build parallel audio preprocessing pipelines for large datasets (300 GB) on AWS S3, reducing manual efforts in model training setup by over 30%
- Wrote an A/B testing library using Python, SQL, Metabase, and SQLAlchemy, increasing resolution rates by 20% across 3 clients while abstracting complex join and window queries

**Software Engineer (Contract)**, Stride.ai – Bangalore, Karnataka, India

May 2021 – Jul 2021

- Developed Django microservices to process handwritten PDFs for over 10 million users using Kafka Producer-Consumer architecture, ensuring 99%+ test coverage with GitHub Actions
- Built a PDF annotator using React PSPDF, Typescript and MongoDB, reducing annotation time by 3 hours on average for over 500 legal documents by increasing image and text metadata available per annotation
- Wrote an internal JSON-XML annotation conversion tool using Abstract Syntax Trees, saving 5+ hours per use case by normalizing format schemas into a singular format for downstream image processing tasks
- Implemented DAG Pipelines in Airflow for large image dataset preprocessing, denoising and cleaning for over 10,000 documents stored on S3, ensuring high quality image datasets for downstream modeling

**IT Software Engineer**, Shell – Bangalore, Karnataka, India

Sep 2020 – Apr 2021

- Built SAP and SQL based reporting interfaces for cash transfer regulatory services and reporting, querying 100+ GB for 500+ users across Global Finance/HR teams, and ensuring near 24/7 uptime
- Developed a full-stack app using REST API-based OData and SAP UI5.js to monitor real-time updates from Shell Retail, enhancing monitoring of over 1,000 products

## Projects

---

**PaperGraphr** <https://adinarayanb.github.io/ConfGraphDataViz/>

- Developed a visualization tool using D3.js and Spark that analyzes graphical relationships between over 300 academic conferences, resulting in an interactive graph with over 1,000 nodes and 5,000 edges.
- Implemented data filtering and interactive features, including a search function, dynamic node selection, and real-time relationship strength adjustments. Deployed on Github Pages and Docker for ease of use.

## Skills

---

**Languages:** Python, Go, Java

**API Frameworks and Databases:** React, Django, Flask, FastAPI, OAuth2, PyTest, PostgreSQL, MongoDB, Redis

**Cloud:** AWS (S3, EC2, Lambda, SQS, ECR, ECS, Glue), GCP

**DevOps/Observability:** GitHub Actions, Docker, Terraform, Elasticsearch, Logstash, Kibana

**Orchestration/Data:** Kubeflow, Kafka, Kubernetes, Airflow, Spark

**Machine Learning:** LLMs, Computer Vision (OpenCV), NLP (NLTK), PyTorch (CNN, RNN-LSTM, Seq2Seq)