Adithya N

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Education

Northeastern University - Khoury College of Computer Sciences - 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, Remote   July 2024 – Present
- Lead the design, development and deployment of the resourceguide.io platform, a scalable OpenAI enabled chatbot built using React, OAuth2, AWS, and Flask, and implemented response caching using Redis.
- Improved response relevancy by 50% by deploying an end-to-end RAG LLM using Transformer embeddings obtained from over 1,000 NGO-related FAQ PDFs using Python and GCP based ETL pipelines.
- Ensured 99%+ test coverage by setting up automated CI/CD pipelines with GitHub Actions and PyTest.

Research Engineer, Skit – Bangalore, Karnataka, India   Dec 2021 – Aug 2022
- Built and deployed scalable speech recognition inference pipelines using Kaldi, PyTorch, AWS, K8s and gRPC Server, which supported real-time streaming for over 5 million multilingual users worldwide.
- Documented and developed tools around the Kaldi speech toolkit, increasing the efficiency of 7 developers in training and deploying models across various use cases, resulting in a 30% reduction in deployment time.
- 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%.

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 interactive graph visualization tool using D3.js and Spark that analyzes relationships between over 300 academic conferences, resulting in an graph with over 1,000 nodes and 5,000 edges, complete with real time search and data filtering

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