

Adi Narayanan Korothe

Bengaluru, India | adinarayanan2003@gmail.com | +91 9061453133 | [in](#) | [G](#) | [T](#)

Education

National Institute of Technology Calicut, B.Tech in Computer Science and Engineering — 7.89 CGPA Dec 2020 – May 2024

- **Relevant Coursework:** Data Structures & Algorithms, Computer Networks, Operating Systems, Compiler Design, Computer Vision, DBMS, Number Theory and Cryptography, Computer Security.

Experience

Member of Technical Staff 2, Oracle — Bengaluru, India Jun 2024 – Present

- Promoted from MTS-1 to MTS-2 for significant contributions to RDBMS internals and the development of AI-driven diagnostic systems.
- **RDBMS Internals:**
 - Developed multiple parsers and analyzers for the AUTO TRIAGE system to automatically identify and resolve critical errors related to space corruption and transaction recovery issues.
 - Engineered an in-memory bucket for enhanced diagnostic data management, preventing critical alerts from being lost in a flood of debug logs.
 - Designed and implemented a procedure to offload space metadata for SecureFiles, significantly improving the efficiency of diagnostics in corruption cases.
- **AI Initiatives:**
 - **SubcompIQ:** Led the end-to-end development of a multi-agentic system with Graph RAG integration to predict bug problem types and sub-components, reducing bug triage time by 30%.
 - **DIAG AI:** Architected a multi-layer agentic system to automate bug analysis by identifying key errors, triaging timeline details, and determining relevant components and subsystems.
 - **GenParse AI:** Built an LLM-based coding agent trained with context engineering to generate efficient XML/XSL parsers, improving the productivity of a 15-person team by approximately 80%.

Builder (Part-time), Sarcophagus DAO — Remote Dec 2021 – Mar 2023

- Contributed to the core development of a decentralized dead man's switch protocol on the Ethereum and Arweave blockchains.
- Collaborated with a 10-member global team on protocol improvements and actively participated in community management, governance proposals, and treasury voting.

Projects

Owly - AI Video Creation Tool

- Architected and built a production-ready tool for programmatic video creation using AI-generated videos, motion graphics, and automated editing.
- Engineered the core AI video generation pipeline, including agentic systems (LangGraph) for multi-modal content orchestration.
- Fine-tuned open-source video generation models and implemented LoRA to ensure facial consistency for brand avatars.
- **Technologies Used:** FFmpeg, React, ComfyUI, LangGraph, RunPods.

Agentic Video Editor

- Converted an open-source video editor ('friction') into an agentic service, enabling video manipulation through natural language commands.
- Built a custom MCP (Master Control Program) server on top of HTTP to interpret commands and control the video editor's functions.

Recursive DNS Resolver from Scratch

- Engineered a recursive DNS server in Python, handling the full resolution chain from root to authoritative servers.
- Implemented iterative lookups, response caching, CNAME chaining, and automatic TCP fallback for truncated packets.
- **Technologies Used:** Python, UDP/TCP Sockets.

Benchmarking High-Performance Clustering for Edge Security

- Implemented and benchmarked a density-adaptive clustering algorithm for high-dimensional IoT data streams.
- Optimized for edge devices, achieving 2.3x faster convergence and 18% higher silhouette scores than K-Means/DBSCAN.
- **Technologies Used:** Python, NumPy, Scikit-learn, Matplotlib.

Project eXPOS - Experimental Operating System

- Built a functional experimental OS from scratch for the XSM architecture, implementing virtual memory with contiguous allocation, page tables, and a BIOS.
- **Technologies Used:** Spl, Expl, XSM Architecture.

Life Detection in Floods using Computer Vision

- Collected and annotated a custom dataset for identifying living beings in floodwaters.
- Trained and combined a U-Net segmentation model and a YOLO object detection model to confirm if a detected body is surrounded by water.

Automated Attendance System Using Face Recognition

- Built a real-time attendance system to automatically detect, identify, and log individuals using face recognition.
- Engineered the full pipeline from image capture and preprocessing to facial recognition and database updates.
- **Technologies Used:** Python, Face Recognition Libs.

Cryptocurrency Wallet

- Created a web-based wallet for a native blockchain with features for wallet creation, import, balance checking, and transactions. Implemented SHA-256 hashing for transaction security.
- **Technologies Used:** JavaScript, HTML, Alchemy API.

Python Attendance Bot

- Developed and deployed a Python automation script on Heroku to reliably mark attendance on a university server, bypassing local internet latency issues.

Technologies

Languages: Python, C++, C, C#, SQL, XML, XSL, JavaScript, HTML

AI & Data Science: LangChain, LangGraph, ComfyUI, LoRA, FAISS Vector DB, Pinecone Vector DB, YOLO, U-Net

Tools & Platforms: AWS, RunPods, Docker, Podman, Git, Oracle DB, MySQL

Scholastic Achievements

JEE Advanced — Secured All India Rank 8590 (amongst 150,000 qualified).	2020
JEE Mains — Qualified with 99.26 Percentile (top 1% of 900,000 students).	2020
National Talent Search Examination (NTSE) — Qualified for Stage II with State Rank 14.	2018