

MOHITH D K

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EDUCATION

PES UNIVERSITY

B.Tech in CSE (AI/ML) | CGPA: 8.16

Bangalore, Karnataka

Aug 2022 - May 2026

- Relevant Coursework: Advanced Data Analytics, Deep Learning, LLM, NLP, Machine Learning, Computer Networks, Operating Systems, Cloud Computing.

EXPERIENCE

A P MOLLER MAERSK

Jan 2026 - present

AI/ML Engineering Intern

On-site

- Built and maintained an AI-powered document extraction pipeline (GPT-4o vision + Azure Document Intelligence OCR) that auto-extracts payment data from proof-of-payment documents to release cargo shipments, processing ~\$800M USD in transaction volume across 10+ countries (Philippines, Japan, South Korea, China, Hong Kong, Macau, and others).
- Designed a two-pass LLM extraction architecture with confidence-scoring and automated accept/human-review routing, achieving 90%+ extraction accuracy while keeping manual review load low at scale.
- Diagnosed and fixed production data-integrity bugs in financial field extraction (incorrect reference/date/account-number values) through root-cause analysis, adding deterministic validation safeguards against LLM hallucination; extended the platform to new markets end-to-end (country-specific logic, new fields, schema/database changes) without disrupting existing country pipelines.
- Built Grafana dashboards for observability and Hedwig-based governance with proactive alerting for the product.

SpectoV

Jun 2025 - Jul 2025

AI Intern

Remote

- Created an intent engine to identify customer intents and built conversational AI modules for customer feedback analysis, enabling intelligent ticket handling and smoother customer-support workflows.
- Fine-tuned a BERT-based NLP pipeline (F1 : 0.91) to automate sentiment and priority detection in customer tickets, streamlining support operations and enhancing scalability for high-volume service environments.

RAPID Research Lab

May 2025 - Jun 2025

Research Intern

on-site

- Conducted cutting-edge research on "Temporal Belief Dynamics in BERT", employing a graph-theoretic approach to analyze interpretable representation drift for a publishable AI/ML project.
- Fine-tuned BERT over 10 epochs and built graph-theoretic network analyses and 2D embedding visualizations to trace representation drift, contributing to a paper accepted at ICCIS 2025.

PROJECTS

Il Colosseo – Real-Time Multi-Agent AI Debate Arena ([ilcolosseo](#))

Aug 2026

- Built a real-time multi-agent AI debate platform with 3 agents (two Gemini debaters arguing opposing sides plus an AI judge) over three rounds, grounded in live web research (Tavily) and streamed via FastAPI and SSE.
- Engineered a quality layer (topic classifier, source-integrity gate, speech evaluator) and a deep-research pipeline for grounded, citable arguments; added multilingual debates in 10 Indian languages with voice output; deployed the frontend on Vercel.

Provenance – Ensemble AI-Content Detection Suite ([provenance](#))

Oct 2026

- Built an ensemble AI-content detector (GPT-2 perplexity, conformally calibrated classifier, C2PA, watermarking) that surfaces per-sentence attribution and method disagreement instead of a single confidence score.
- Added an Attack Lab that stress-tests each detector with live structural and T5 paraphrase attacks, plus a semantic retrieval ledger (fastembed, SQLite); FastAPI + Next.js stack with batch mode and Docker deploy config.

DawaiSathi – Multilingual AI Medicine Explainer ([dawaisathi](#))

Jul 2026

- Launched an MVP of a consumer-facing pharma service (10+ users): snap a strip or type a medicine name to get plain-language usage, side effects and warnings in 11 Indian languages via Gemini, streamed over SSE.
- Developed the full-stack product with Next.js 14, Supabase (PostgreSQL, Google OAuth) and Razorpay payments with tiered pricing; added follow-up medicine chat, explanation history, and Vercel deployment.

Temporal Belief Dynamics in BERT – Research Project

Jun 2025 - Jul 2025

- Mapped the evolution of BERT's internal "beliefs" across 10 fine-tuning epochs, using graph-theoretic networks and 2D embeddings to uncover and visualize hidden representation drift with research-grade clarity.
- Findings accepted for publication at the 7th International Conference on Communication and Intelligent Systems 2025.

OPEN SOURCE CONTRIBUTIONS

pydantic-ai (21k★) – Azure Content-Filter Error Handling Fix

Oct 2026

- Fixed an Azure Responses API bug where prompt blocks without content_filter_result raised ModelHTTPError instead of ContentFilterError; reproduced the issue, wrote the fix and regression test, and merged as co-author:
github.com/pydantic/pydantic-ai/pull/10805

REA (358k★) – Reconstruction Ledger Blank-Label Fix

Oct 2026

- Fixed a bug in REA, an MCP/CLI reverse-engineering toolkit for AI agents, where whitespace-only graph labels caused reconstruction-ledger generation to fail; reproduced it, added regression tests for both code paths, and got the fix merged:
<https://github.com/morluto/rea/pull/6137>

PUBLICATIONS

M.D.K. et al, “*Temporal Belief Dynamics in BERT: A Graph-Theoretic Approach to Interpretable Representation Drift*,” published at 7th International Conference on Communication and Intelligent Systems (ICCIS 2025), BITS Pilani, Goa, *Springer LNCS*

TECHNICAL SKILLS

Languages & Core Development: Python, SQL, HTML/CSS, React, JavaScript, TypeScript, Next.js

AI/ML & Data: PyTorch, Keras, TensorFlow, Hugging Face, Pandas, LLM, NLP, API engineering, Prompt Engineering, Multi-Agent Systems, Claude Code, OpenCode, Copilot

Backend, Databases & Streaming: FastAPI, MongoDB, Node.js, MySQL, PostgreSQL, Supabase, REST APIs, SSE

Cloud, DevOps & Tools: Docker, Git, Azure, Vercel, Bruno, Grafana

ACHIEVEMENTS

Winners: HACK-AI 24-hour Data Analytics Hackathon - PES University in association with Vision Karnataka Foundation.