

Dhruvadeep Malakar

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EDUCATION

Indian Institute of Technology Palakkad

Bachelor of Technology in Data Science

Palakkad, KL

Nov 2022 – Present

Maharishi Vidya Mandir

Science Stream (CS)

Guwahati, AS

Aug. 2020 – March 2022

EXPERIENCE

Texas Instruments

Software Developer Intern

May 2025 – July 2025

Bangalore, India

- Worked under IT Solutions, one of the core Business Support Entities at TI.
- Developed scalable full-stack applications and data pipelines for internal/external use cases in company.
- Built and deployed an end-to-end Client Lifecycle Management System for automated hardware requests and renewals tailored to job profiles.
- Collaborated cross-functionally to ensure high reliability, role-based access control, and cost-efficient infrastructure management.

PROJECTS

Client Lifecycle Management | *OracleDB, Python, NextJS, FastAPI, Cron*

May 2025 – July 2025

- Automated employee laptop lifecycle based on job roles, enabling AI engineers to request GPUs and reducing mismatched resource allocations.
- Designed a full-stack system with administrative portals for managing manufacturers, devices, and persona-based eligibility.
- Built notification and email reminder workflows using cron jobs to streamline asset renewal without human intervention.

VoicePilot + ViZearch | *Python, React, CI/CD, NLP, AI*

Jan 2025 – March 2025

- Combined natural language understanding and vision-based search into an autonomous AI interface for human-computer interaction.
- Voice-controlled assistant with intelligent media query handling, system-level integration, and semantic visual search.
- CI/CD pipelines enabled reliable deployment and cross-platform compatibility.

MCP (Server and Client) - From Protocols to Product | *MCP, AI, Docker*

May 2024 – Jul 2025

- Built complete MCP client-server infrastructure and a centralized registry for developers to host, publish, and discover MCP tools.
- Reverse engineered MCP protocol to understand service lifecycle, manage deployments, and remotely control servers.
- Enabled tool moderation, discovery, and lifecycle events through containerized deployment pipelines.

POSITION OF RESPONSIBILITIES

YACC Head | President

IIT Palakkad

Mar. 2023 – Present

Palakkad, KL

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, C, Go, SQL (Postgres, MySQL, SQLite), Scala

Frameworks and Libraries: React, React Native, NodeJS, FastAPI, TailwindCSS, SkLearn, TensorFlow, PyTorch

Big Data Tools: Apache Spark, Apache Hadoop, Apache Hive, Apache Kafka

Cloud and DevOps: AWS, Azure, Oracle Cloud, DigitalOcean, GitHub Actions, Docker, Git, Nginx

Databases: PostgreSQL, MySQL, MongoDB, Redis, PocketBase, Firebase

Developer Tools: VS Code, GitHub, Adobe Photoshop, Figma, CUDA

ML/DL Libraries and Tools: NumPy, Pandas, Matplotlib, MLflow, Jupyter