

Deepak KUMARAN T S

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EDUCATION

Northeastern University – College of Engineering

Boston, MA

Master of Science in Information Systems

Graduation in May 2026

- Related Coursework: Application Engineering and Development, Data Management and Database Design, Program Structure and Algorithms, Web Design and User Experience Engineering, Generative AI

SRM University

Chennai, TN, India

Bachelor of Technology in Computer Science Engineering

May 2022

- Related Coursework: Data Structures & Algorithms, Database Management Systems, Computer Networks and Security, Software Engineering, Artificial Intelligence and Machine Learning

Honors

EXPERIENCE

Cognizant Technology Solutions

Bengaluru, KA, India

Programmer Analyst - Full Stack Web Development & IoT

June 2022 – Oct 2023

- Optimized IoT modules for **Samsung and Qualcomm** using Java and Spring Boot, enhancing reliability & cutting support tickets by 15%.
- Built and deployed an IoT Monitoring System with Kafka and Angular, ensuring 99.8% uptime and faster issue detection.
- Designed and integrated RESTful APIs, enhancing system response speed and stability.
- Strengthened thread-safety mechanisms, minimizing system crashes across core services.

Cognizant Technology Solutions

Bengaluru, KA, India

Programmer Analyst Trainee - Full Stack Web Development

Dec 2021 – June 2022

- Built and tested production-grade modules using Java, Spring Boot, and MySQL in an Agile DevOps environment.
- Designed and integrated REST APIs for document automation, cutting manual work by 20%.
- Led a Node.js + MongoDB mini-project to streamline onboarding, improving process efficiency by 25%.
- Recognized among the top 7% of new joiners for technical excellence and timely delivery.

PROJECTS

Netflix Support AI: RAG Based Customer Support System

Boston, MA

Personal Project

July 2025

- Engineered a Retrieval Augmented Generation (RAG) pipeline integrating Llama 3 (8B, Ollama runtime) with Neo4j Aura to dynamically translate user input into Cypher queries for precise graph-based resolution of customer support intents.
- Modeled and programmatically populated a domain-specific property graph capturing Netflix subscription tiers, device compatibility, content quality, and feature entitlements using Cypher batch ingestion workflows.
- Built a full-stack architecture (React + Flask + Neo4j) supporting real-time user interaction. Implemented query validation, prompt templating, and multi-hop traversal logic to mitigate LLM hallucinations and ensure schema-aligned execution.

AI-Powered Supply Chain Demand Forecasting System | [Streamlit App](#) | [Github](#)

Boston, MA

Personal Project

May 2025

- Engineered an end-to-end deep learning forecasting pipeline using LSTM (PyTorch) with data preprocessing in Pandas/Numpy and model deployment via Streamlit, achieving 92 % accuracy across SKU-level demand series.
- Designed a responsive full-stack dashboard integrating Streamlit + Plotly + Flask APIs for real-time inference, CSV ingestion, and visual analytics on weather, calendar, and sales trends.
- Automated data refresh, model retraining, and visualization workflows using AWS S3 + Lambda and Docker containers, improving forecast reliability and reducing manual tuning time by 40%

Sphere: AI-Powered Student Community Platform | [Github](#)

Boston, MA

Student team Lead

Feb 2025 - Apr 2025

- Built a scalable full-stack platform with React (Next.js), FastAPI, and Node.js microservices, integrating Firebase Auth, AWS S3, and WebSockets/WebRTC for secure real-time chat, media sharing, and notifications.
- Integrated OpenAI API + LangChain to deliver AI-driven study assistance, smart content search, and contextual recommendations - enhancing student productivity and engagement by 35%.

TECHNICAL SKILLS

- Programming Languages: Python, Java, C, C++, JavaScript, SQL, NoSQL, TypeScript, Shell
- AI & Machine Learning: PyTorch, TensorFlow, scikit-learn, Keras, Hugging Face Transformers, Generative AI, Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Prompt Engineering, LangChain, NLP, Graph-Based Reasoning, Neo4j Graphs
- Web Development: React.js, Next.js, Node.js, Express.js, FastAPI, HTML5, CSS3/SASS, Tailwind CSS, Bootstrap, Zustand, Socket.IO, REST & GraphQL APIs, Microservices
- Databases: MySQL, PostgreSQL, MongoDB, Oracle SQL, Neo4j, Redis, DynamoDB, Amazon RDS
- Cloud & DevOps: AWS (EC2, S3, Lambda, API Gateway, ECS, CloudFront, RDS), Azure, GCP, Docker, Kubernetes, Terraform, GitHub Actions, CI/CD Pipelines, Linux
- Data & Analytics: Pandas, NumPy, Matplotlib, Seaborn, Power BI, Tableau, Hadoop, Spark
- Enterprise Systems: SAP Build Apps, SAP HANA Cloud, ERP Integration, CRM Systems (Salesforce, MSD), SAP Analytics Cloud
- Tools & Other Skills: Git, GitHub, Figma, VS Code, Xcode, UI/UX Design, Agile/Scrum Methodology, Time Management, Adaptability

CERTIFICATIONS

Google Cloud Certified - Generative AI Leader | [Credly](#)