

Keerthi Kolan

+1 (510) 330-9516 | contact.keerthikolan@gmail.com | LinkedIn | GitHub | Portfolio

PROFESSIONAL SUMMARY

M.S. Computer Science graduate with experience in building scalable backend services, cloud-native applications, and client-facing solutions. Skilled in **Java, Python, C#, JavaScript/TypeScript, SQL**, and modern frameworks, with expertise in **Microsoft Azure** and automated data pipelines. Strong foundation in **AI/ML and Large Language Models (LLMs)**, including ChatGPT-style assistants and retrieval-augmented pipelines.

EXPERIENCE

Machine Learning Research Intern | RooGenAI

July 2025 – Present

- Pioneered the first neural network on an ultra-low-power AI accelerator, demonstrating **greater than 95% accuracy** in image classification
- Developed a custom ML runtime in **Python/NumPy**, implementing core algorithms (e.g., **Conv2D, backpropagation**) from scratch to enable validation of **50+ model architectures** incompatible with **PyTorch/TensorFlow**
- Prototyped a **Retrieval-Augmented Generation (RAG) pipeline** using **LangChain** and **OpenAI GPT models**, enabling domain-specific document Q&A with improved accuracy and reduced hallucinations

Software Engineer | Chronodat

July 2021 – July 2023

- Contributed to the development of a licensing microservice using **C# and Azure Functions**, scaling from prototype to production to support **10K+ daily license validations**
- Automated payroll and onboarding **data pipelines** with **SQL, Azure Functions, and Power Automate**, saving **15+ hours weekly** for **50+ client organizations** (20K+ employees) and improving partner satisfaction
- Built and standardized front-end modules using **React, TypeScript, JavaScript, HTML, and CSS**, ensuring seamless **HTTP-based integrations**, eliminating UI inconsistencies, and reducing feature development time by **25%**
- Migrated applications to **Azure (App Service, Functions, SQL Database, Blob Storage, Key Vault, Service Bus)**, improving resource efficiency and reducing cloud expenses by over **20%**
- Orchestrated CI/CD pipelines with **GitHub Actions, Docker, and Terraform**, shrinking release cycles from **14 days to 3 days**

Software Engineer Intern | Chronodat

April 2021 – June 2021

- Implemented **RESTful APIs** in **Java Spring Boot** for core application features including an **Application Tracking System** and **Time-Off Reporting System**, enabling seamless data exchange and reducing manual HR processing time
- Built reusable **React components** for internal dashboards, streamlining state management and reducing front-end implementation time for new features by approximately **20%**

EDUCATION

California State University, East Bay, CA

August 2023 – May 2025

Master of Science in Computer Science

GPA: 3.97/4.00

Coursework: Web Systems, Advanced Algorithms, Cloud Computing, Machine Learning

Jawaharlal Nehru Technological University, Hyderabad, India

August 2019 – July 2023

Bachelor of Technology in Computer Science and Engineering

GPA: 8.37/10.00

Coursework: Object-Oriented Programming, Data Structures, DBMS, Distributed Systems

TECHNICAL SKILLS

Core Languages: Java, Python, C++, C#, JavaScript, TypeScript, SQL

Frameworks: React, Node.js, Express, Django, Redux, Spring Boot

Systems & Databases: PostgreSQL, MySQL, MongoDB, DynamoDB, NoSQL

Cloud & DevOps: Microsoft Azure (App Service, Functions, SQL Database, Blob Storage, Key Vault, Service Bus, DevOps), AWS (EC2, S3, Lambda), Docker, Kubernetes, CI/CD, Terraform

AI/ML & LLMs: Hugging Face Transformers, LangChain, OpenAI APIs, Scikit-learn, PyTorch, TensorFlow

Data Pipelines: SQL, ETL, Pandas, Azure Data workflows, AWS Transcribe, REST/GraphQL APIs

Additional Tools: Git, GitHub, GraphQL, Postman, Visual Studio, Figma

PROJECTS

Context-Aware Chatbot with Secure Full-Stack Pipeline [GitHub]

- Built a ChatGPT-style interface using the **MERN stack** to enable **real-time messaging** with persistent chat history
- Integrated **OpenAI's GPT API** into backend services to deliver **context-aware conversational responses**
- Implemented authentication using **JWT, HTTP-only cookies, and password encryption** to ensure **secure user data management**

Scalable Media Transcription System (AWS Serverless) [GitHub]

- Architected a **serverless pipeline** on AWS (S3, Lambda, API Gateway, Transcribe) to automate audio transcription, designed for **zero operational overhead** and automatic scaling
- Engineered a **React** frontend that reduced a previously 15-minute manual upload process to a single click, providing real-time status tracking and improving user productivity