

ARVIND LAKSHMANAN

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[Portfolio](#) | [LinkedIn](#) | [GitHub](#)

PROFESSIONAL SUMMARY

AI Software Engineer with **2+ years** in AI research and **3+ years** building enterprise software. Delivered 20+ production features and APIs that synchronize **10M+ orders** and **5M+ product records** across Zoho applications and major eCommerce platforms. Reduced SQL query latency by **49%** and remediated critical security findings. Builds on this foundation to develop RAG applications, LLM integrations, and evaluation pipelines.

TECHNICAL SKILLS

- **Languages:** Java, Python, JavaScript, TypeScript, SQL
- **Backend & Frontend:** Spring Boot, FastAPI, Node.js, Java Servlets, React, REST APIs
- **AI & Retrieval:** LangChain, LangGraph, Hugging Face, Ollama, RAG, LLM tool calling, AI agents, prompt engineering, RAG evaluation
- **Databases & Messaging:** PostgreSQL, pgvector, MySQL, MongoDB, Redis, Apache Kafka
- **Cloud & Development:** AWS, Docker, Kubernetes, Nginx, Jenkins, Travis CI, Git, GitHub, JUnit

PROFESSIONAL EXPERIENCE

Zoho Corporation

Chennai, India

Software Developer

May 2022 – December 2024

- Delivered **20+ production features and APIs** connecting Zoho Inventory with Amazon, eBay, Etsy, and Shopify, supporting synchronization of **10M+ orders** and **5M+ product records**.
- Automated shipping, invoicing, sales returns, fulfillment, and stock-update workflows across marketplace integrations.
- Optimized SQL queries, reducing latency from **350 ms to 180 ms (49%)** and improving application responsiveness.
- Remediated **10+ severe and 15+ medium-severity vulnerabilities**; represented engineering during Deloitte-led security audits and coordinated findings through remediation.
- Executed data and metadata migrations across millions of records, writing scripts to identify and repair corrupted data while maintaining a decade-old codebase.
- Handled 2,000+ developer tickets spanning production issues, integrations, and customer workflows.

Project Trainee

November 2021 – May 2022

- Maintained inventory and sales reporting frameworks supporting **millions** of inventory records and sales transactions.
- Resolved invoice tax-calculation defects in **EU and India** application versions, addressing region-specific tax scenarios.

Know-I | Sri Venkateswara College of Engineering

Chennai, India

Research Lead

October 2021 – July 2022

- Mentored 250+ junior students on AI concepts, literature review, research methods, and academic research practices.
- Conducted 10+ AI/ML literature reviews and comparative analyses; co-authored published research on CNN-based Tamil handwriting recognition.

Senior Executive Member

July 2020 – October 2021

- Coordinated 20+ workshops, technical sessions, research discussions, and student-development programs.

PROJECTS & PUBLICATIONS

Employee RAG System | Full-Stack AI Application | [GitHub](#)

- Built a document-intelligence application with automated ingestion, cleaning, overlapping chunking, Hugging Face embeddings, and pgvector storage across **7 document formats**.

- Implemented hybrid retrieval combining semantic and keyword search with Reciprocal Rank Fusion, query rewriting, embedding-based reranking, and source diversification for citation-grounded answers.
- Developed FastAPI REST endpoints and a React/TypeScript interface integrating **4 LLM providers**: OpenAI, Anthropic, Hugging Face, and Grok.
- Added Redis-backed background processing, concurrency-safe ingestion, and AES-256-GCM encryption for API credentials.
- Implemented automated evaluation with ground-truth generation, LLM-as-a-Judge scoring, Precision@K, Recall@K, NDCG, answer correctness, groundedness, and citation accuracy; tracked latency and token costs.

Handwritten Tamil Character Recognition Using Deep Neural Networks | [Publication](#)

- Developed a CNN-based recognition system using the uTHCD dataset to classify **156 Tamil character classes**; co-authored the paper published in IJCST, Volume 10, Issue 4.

EDUCATION

Concordia University	January 2025 – August 2026
Master of Engineering in Software Engineering	Montréal, QC
Sri Venkateswara College of Engineering	August 2018 – September 2022
Bachelor of Engineering in Computer Science	Chennai, India