

UDAY KIRAN KARUSODI

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TECHNICAL SKILLS

Languages	Java, Python, SQL, C/C++
Backend	Spring Boot, Spring Data, Spring Security, REST APIs, Django
Databases & Indexing Solutions	PostgreSQL, Redis, Elasticsearch, Faiss, Weaviate
DevOps/Cloud	Docker, AWS, HAProxy
Frontend	Flutter, HTML, CSS
Tools	Git, OAuth2, WebSockets

PROFESSIONAL EXPERIENCE

Member Technical Staff - Zlabs (R&D Division)

Jul 2023 – Present

Zoho Corporation

Chennai, India

- Improved plagiarism detection in **Zoho Writer** by **75%** and cut inference time by **43%** (0.3s to 0.17s) through optimising a **Java-Tomcat backend** and a containerised **FastAPI & Python service** for vector generation (quantised inference, dockerised deployment).
- Built a **prompt-driven RAG pipeline** combining LLM calls with **keyword & semantic search** over **Faiss** and **Weaviate**; integrated with crawling and SERP APIs for multi-source retrieval.
- Migrated crawler to **hybrid sync/async model** using Java Servlet 3.0 AsyncContext & custom executors, enabling synchronous responses while maintaining webhook scalability.
- Contributed to the **Automatic Extraction pipeline** to retrieve structured data from web content by combining image plus text classification with fine-tuning as part of the pipeline; improved extraction accuracy by **60%**.

EDUCATION

Gayatri Vidya Parishad College of Engineering (Autonomous)

Jul 2019 – Jul 2023

Visakhapatnam, Andhra Pradesh

Bachelor of Technology (B.Tech) in Computer Science Engineering

CGPA: 9.22/10

PROJECTS

DisciFi (Disciplined Finance Application) ([GitHub](#))

May 2025 - Present

- Developed a full-stack app combining finance tracking with behavioural nudges (roast & boast) to improve financial discipline. Implemented secure auth, budgets, transactions, and AI-powered insights driven by MCP.
- Key Technologies:** Java, Spring Boot, Elasticsearch, Spring Data, Spring Security, PostgreSQL, Redis, RabbitMQ, Google GenAI toolbox (MCP).

Advanced Object Detection in Images (AICTE Hackathon) ([Github](#))

Nov 2021 – Jan 2022

- Built an automated CAPTCHA-breaking system using Mask R-CNN and grid-based algorithm, achieving a 74 % success rate against Google reCAPTCHA v2 challenges as part of a national hackathon (Manthan-2022).
- Key Technologies:** Python, Mask R-CNN, PyTorch, Detectron, FastAPI, Docker

ACHIEVEMENTS & CONTRIBUTIONS

- Open-Source Contributions: $\approx$ 1,500 LOC to [chonkie](#) plus patches/docs to 3+ repos
- Finalist, AICTE Hackathon - Manthan 2021 (Advanced Object Detection in Images)
- Finalist, Smart India Hackathon 2022 (Detection of Criminal Activity)
- Core Member, Google Developer Student Clubs (GVP-AI) - Technical Content Speaker