

# RANJITHA NARASIMHAMURTHY

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## EDUCATION

**University of California Riverside, California, USA - GPA : 3.7/4**

**Sep 2024 – Mar 2026**

Master of Science in Computer Science

- **Coursework:** AI, ML, Compilers, Big Data, Information Retrieval, Algorithms, Data Mining, Spatial Computing, DBMS

- **Academic Role:** Student Assistant for CS 141 – Intermediate Data Structures and Algorithms (Summer and Fall 2025)

- Graded assignments and exams for 120+ students including topics like arrays, linked lists, trees, graphs, and hashing.

**Visvesvaraya Technological University, Bengaluru, Karnataka, India**

**Aug 2019 – Jun 2023**

Bachelor of Engineering in Computer Science

- **Coursework:** DSA, DAA, CO, Web Technology, Software Engineering, OS, DBMS, Computer Networks, Unix

## PROFESSIONAL EXPERIENCE

**Software Engineer, ThoughtClan Technologies Private Limited, Bengaluru, India**

**Jul 2023 – Jun 2024**

- Exposed REST endpoints in ASP.NET Web API for submissions, validation and approvals; standardized contracts and error handling, resulting in 30% fewer integration bugs and 25% faster feature delivery.
- Designed SQL Server schemas with constraints and stored procedures; optimized with indexing and pagination, achieving double the peak throughput and 20% faster approval queues.
- Developed SSRS reports with parameterized filters, shared data sources, and scheduled subscriptions; standardized KPI definitions and cut manual reporting effort, improving on-time delivery rate to 98% and decreasing rework by 20%.
- Led the backend migration of a legacy app to .NET Core (DI, modular services) alongside an Angular front end; improved UX and performance by 15%.

**Software Engineer Intern, ThoughtClan Technologies Private Limited**

**Feb 2023 – Apr 2023**

- Built a Spring Boot backend with layered services and controllers, DTOs and validation, global exception handling, and pagination. Staging P95 stayed at or under 500 ms with smoother client integrations.
- Developed React booking and admin modules, protected routes with Firebase JWT, role guards, refresh tokens, and form validation. Client errors decreased by 18%, and admin actions were properly gated in UAT.

**Full Stack Intern, Varcons Technologies Private Limited, Bengaluru, India**

**Aug 2022 – Sep 2022**

- Conceptualized and developed a Car Service Management Platform to enhance user engagement and efficiency.
- Designed responsive web pages with databases, improving data management by 20%.
- Designed REST APIs (status codes, pagination, validation); reduced round-trips and kept P95  $\leq$  500 ms.

## RELEVANT PROJECTS

**Scalable Task Scheduler | AWS Lambda, DynamoDB | (Apr - Sept 2025)**

- Serverless task scheduler with REST create/update/cancel; each task triggers a Lambda at the scheduled UTC time.
- Supports one-shot cron; idempotent (conditional writes); DLQ/retries; EventBridge, SQS, IAM, CloudWatch.

**Reddit Hybrid Search Engine | PyLucene, BERT, Flask | (Jan - Mar 2025)**

- Built a hybrid search service (PyLucene BM25 and BERT embeddings with FAISS) behind Flask APIs; returned top-k results with re-ranking and kept P95 latency under 50 ms.
- Developed a PRAW-based crawler that paginates subreddit posts and comments and writes batched JSON files of 10 MB each with rate-limit backoff and deduplication by post ID.

**Compiler Optimization with LLVM | LLVM, C++, Static Analysis | (Sep - Dec 2024)**

- Wrote LLVM passes in C++ for constant propagation and SSA optimizations, boosting performance by 30%.
- Built a test harness that compiles C to LLVM IR, runs the passes, and verifies results; automated runs over 100+ programs and recorded IR stats and execution times.

## TECHNICAL SKILLS

**Languages:** Python, C#, Java, C, C++, JavaScript, SQL, HTML, CSS, PHP

**Frameworks/Tools:** .NET, Spring Boot, React, Flask, OpenCV, PowerApps, SSRS, Git, Docker, CI/CD, Postman

**Cloud/Big Data:** AWS (API Gateway, Lambda, EventBridge, CloudWatch), Azure, Apache Spark, QGIS, PowerBI

**Databases:** MySQL, PostgreSQL, MongoDB, PostGIS, DynamoDB

**Operating Systems:** Linux, Unix, Windows