

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, approvals, and audit; 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/sorting. 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

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.

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

- Designed a serverless distributed scheduler using AWS Lambda, API Gateway, DynamoDB, ensuring 99.9% uptime.
- Integrated logging and monitoring with CloudWatch for fault tolerance and observability.

TECHNICAL SKILLS

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

Frameworks/Tools: .NET, Spring Boot, Node.js, Flask, OpenCV, OpenGL, PowerApps, SSRS, Git, Docker, CI/CD, Postman

Cloud/Big Data: AWS, Azure, Apache Spark, GeoPandas, QGIS, PowerBI

Databases: MySQL, PostgreSQL, MongoDB, PostGIS, DynamoDB

Operating Systems: Linux, Unix, Windows