

# Kruthi Hosamane

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## EDUCATION

### M.S. Computer Software Engineering

Dec 2025

Arizona State University, Tempe, AZ

3.82 GPA

**Relevant Coursework:** Advance Data Structures and Algorithms, Software Verification Validation and Testing, Software Security, Information Assurance and Security

## TECHNICAL SKILLS

**Programming Languages:** Java, JavaScript, Python, C/C++, Dart

**Front-End:** HTML, CSS, React.js, Bootstrap, Flutter

**Tools, Databases, and Technologies:** Node.js, Express.js, PostgreSQL, MongoDB, Git, Spring Boot, Restful APIs, Mockito, Junit, Postman, Spring MVC, iBatis, MyBatis, Jira

## PROFESSIONAL EXPERIENCE

### Instructional Aide | *Database Management Systems* | Arizona State University

Aug 2024 – May 2025

- Collaborated with faculty to refine curriculum and improve delivery of core DBMS topics including **normalization, indexing, SQL optimization, and ER modeling**.
- Led weekly labs and tutorials for **80+** students, simplifying database concepts through real-world examples.
- Guided students in hands-on work with **PostgreSQL, MySQL, and ERD tools** for schema design and SQL debugging.
- Graded **SQL** assignments and projects, ensuring clarity, efficiency, and relational integrity.

### Software Developer | *SpringBoot, Java, Maven* | Xmplar Management Solutions Private Limited

Aug 2022 – Dec 2023

- Developed and maintained **RESTful APIs** using **Spring Boot**, optimizing performance and scalability, reducing downtime through root-cause debugging, and improving load handling—resulting in a **15%** faster response time.
- Utilized **Github** for **version control** and **Maven** for dependency management, streamlining deployment time by **30%**.
- Optimized **PostgreSQL** queries with **indexing** and **caching**, cutting query time by 40% and boosting performance.
- Executed **JUnit & Mockito** tests, lowering production bugs by **30%** and elevating stability.
- Migrated legacy ORM layer from **iBatis** to **MyBatis**, increasing maintainability and reducing future development time by **40%**, yielding long-term technical debt savings of nearly **\$7,500** annually

### Fullstack Developer Intern | *Flutter* | Xmplar Management Solutions Private Limited

Dec 2021 – Jun 2022

- Integrated **RESTful APIs** and handled **JSON** serialization for seamless backend connectivity and dynamic UI updates.
- Structured and implemented an engaging **Flutter** UI, improving user experience and increasing app retention by **20%**.
- Conducted widget testing and resolved UI bugs, increasing interface stability and reducing crash reports by **35%**.

## PROJECTS

### Real Estate CRM with User Authentication | *React, Node.js, Express, MongoDB, JWT*

Feb 2025 – May 2025

- Built a full-stack CRM to manage listings and tasks, with secure JWT-based authentication and role-based access.
- Designed **15+ RESTful APIs** for CRUD operations, improving backend communication and response time.
- Programmed a responsive, mobile-friendly UI using **Tailwind CSS**, enhancing usability across devices.

### Integrated Crime Data Analysis | *OWL Ontology, GraphDB, SPARQL, Azure*

Aug 2024 – Dec 2024

- Engineered a semantic knowledge graph using **OWL** and **GraphDB**, enabling advanced **SPARQL** queries for crime pattern and hotspot analysis across cities.
- Created **15+ REST APIs** for **CRUD** operations, improving backend efficiency.
- Deployed app to **Azure** with **CI/CD**, reducing manual deployment effort by **50%** and maintaining **99%** uptime.
- Enabled real-time cross-city comparison of crime categories across **12+** parameters (e.g., type, time, severity).

### Machine Learning - Driven Musical Chord Detection | *Python, Pandas, NumPy, MySQL*

Jan 2022 – Jun 2022

- Analyzed chord patterns using **Machine Learning** with **Python** and **MySQL**, extracting theory insights.
- Processed diverse data with **pandas/NumPy**, achieving 96% accuracy.