GEETHIKA KOLUKULURI

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Computer Science graduate with experience in full-stack web and mobile development. Experienced in Java, Python, and Swift, with a focus on building scalable, client-server applications and integrating RESTful APIs.

SKILLS

Languages: HTML, CSS, Java, Python, Swift, JavaScript

Frameworks/Web: SpringBoot, SpringMVC, Hibernate, RESTful APIs, SwiftUI

Data/Cloud: MySQL, PostgreSQL, MongoDB, Firebase, Cloud Firestore

Tools: Git, Xcode, CloudSim Plus, scikit-learn

EDUCATION

Master's in Science, Applied Computer Science   *Aug 2024 - Dec 2025*
Northwest Missouri State University.   *GPA 3.8/4.0*

- Received Scholarship along with the Graduate Assistantship

Bachelor of Technology, Computer Science and Engineering   *Jan 2020 - Mar 2024*
Lendi Institute of Engineering and Technology, JNTUK   *GPA 8.42/10*

WORK EXPERIENCE

Graduate Assistant – Mobile Computing (iOS)   *Aug 2025 - Dec 2025*
Northwest Missouri State University | Maryville, MO

- Guided students in implementing the MVVM architectural pattern to ensure a clean separation between UI components and business logic.
- Debugged complex issues related to asynchronous data loading, state management, and application lifecycle events to maintain high app performance.
- Facilitated the connection of mobile clients to API-driven backends by educating students on request-response flows and structured data handling.

Software Development Intern   *Oct 2023 - Apr 2024*
V&V Software Solutions | Visakhapatnam, India

- Developed a web-oriented clinical decision support system using Java-based REST APIs to facilitate modular backend services.
- Integrated a machine learning-driven clinical prediction module for early detection of Rheumatic Heart Disease into the application backend.
- Engineered data preprocessing pipelines involving normalization, missing-value handling, feature filtering, and outlier detection which improved data quality and reduced false negatives by 18%.
- Enhanced API responsiveness and stability under concurrent access conditions to ensure scalability for enterprise-level deployment.
- Partnered with senior developers to manage end-to-end delivery of client-oriented software from responsive UI design to backend integration.

PROJECTS

Cloud-Based IoT Healthcare Monitoring Simulation   *Dec 2025*

- Designed and implemented a Java-based simulation framework to model real-time SPO_2 patient monitoring as a latency-sensitive healthcare application using CloudSim Plus and EdgeCloudSim.
- Simulated end-to-end application data flow including sensor ingestion, edge-level processing, and cloud-based task execution to study client–server and edge–cloud interaction patterns.
- Processed real SPO_2 healthcare datasets by converting continuous time-series readings into fixed time-window simulation tasks (cloudlets), enabling realistic backend workload modeling.
- Implemented task execution and scheduling logic based on VM resources (MIPS, CPU cores, memory, bandwidth) to evaluate application-level latency, throughput, and concurrency behavior.

Tools: Java, CloudSim Plus, EdgeCloudSim, Distributed Systems Simulation, Client–Server Architecture, Performance Analysis, Git, Gradle

SimpleFirebaseApp – iOS Cloud-Backed Application   *Nov 2025*

- Developed a native iOS application that demonstrates cloud-backed data storage and retrieval using Firebase Cloud Firestore, focusing on application-to-backend integration.
- Designed a multi-screen UI using Storyboards, including form-based data input and a table-based display screen for viewing stored records.
- Implemented real-time data synchronization using Firestore snapshot listeners, enabling automatic UI updates when backend data changes.
- Built validation logic to enforce required fields and phone number constraints, displaying user-friendly alerts for error handling and success feedback.
- Implemented swipe-to-delete functionality to remove records from the UI and backend database simultaneously, demonstrating real-time backend consistency.
- Gained hands-on experience integrating mobile applications with cloud backend services, similar to how web or mobile clients interact with centralized systems like EPR platforms.

Tools: Swift, Xcode, Firebase, Cloud Firestore, iOS Storyboards, UITableView, REST-style Backend Integration

Pollution Detector: An Interactive iOS App for Environmental Awareness   *Apr 2025*
Conference Presentation | MINK-WIC Conference (Kansas – Women in Computing)

- Developed a native iOS application titled Pollution Detector using SwiftUI to visualize air quality and noise pollution metrics.
- Presented the application architecture and design choices to academic and industry professionals at the conference.
- Discussed development challenges and lessons learned in building robust client-side applications without persistent network dependencies.