

# AKHIL JONNALAGADDA

Lowell, MA, USA | (774)-786-3206 | [github.com/Akhil](https://github.com/Akhil) | [Akhiljonnalagadda851@gmail.com](mailto:Akhiljonnalagadda851@gmail.com) | [www.linkedin.com/in/akhil85](https://www.linkedin.com/in/akhil85)

## OBJECTIVE

Software Engineer passionate about creating meaningful, user-focused solutions with a strong foundation in Java, Node.js, PostgreSQL, and Google Cloud Platform. Committed to building scalable, secure, and efficient applications in Agile, cloud-based environments that drive real-world impact and enhance digital experiences.

## EDUCATION

### University of Massachusetts Lowell, Lowell, MA

GPA: 3.7/4.0

Master of Science in Computer Science

Sep 2023 – May 2025

### Bharath Institute of Higher Education and Research, Chennai

GPA: 9.3/10

Bachelor of Technology, Computer Science and Engineering

June 2019 – May 2023

**Coursework:** Object-Oriented Programming, Operating Systems, Computer Networks, Advanced Databases, Internet & Web Systems, Cloud Computing, Machine Learning, Data Structures & Algorithms.

## TECHNICAL SKILLS

Languages & Web Technologies	: Java, JavaScript, SQL, Python, HTML5, CSS3
Frameworks & Libraries	: Spring Boot, React.js, Node.js, Express.js, NumPy, Pandas, TensorFlow
Databases & Cloud Platforms	: PostgreSQL, MongoDB, Google Cloud Platform (GCP)
DevOps & Tools	: Git, GitHub, Jenkins, CI/CD Pipelines
Development Practices	: Agile Methodology, Microservices, RESTful API Design
Operating Systems	: Windows, Linux, macOS
IDEs & Editors	: IntelliJ IDEA, Visual Studio Code, Eclipse, PyCharm

## PROJECT EXPERIENCE

### Remote Patient Health Monitoring System

Jan 2025 – May 2025

- Designed a real-time Android application using **Java** and **Spring Boot** to monitor ECG signals and detect heart attacks, triggering automated SMS alerts to emergency contacts for timely medical response.
- Created** RESTful APIs to handle ECG data ingestion and emergency contact workflows and **devised** efficient SQL queries for managing patient records and ECG signal metadata in a PostgreSQL database.
- Followed** Agile methodologies and maintained Git-based version control, ensuring smooth collaboration, clean code practices, and continuous integration across the development lifecycle.
- Collaborated in providing support for deployments in production, contributing to the overall success of the project.
- Deployed** a TensorFlow-based **LSTM** model, trained in Python on **2.44 million** PhysioNet ECG samples with **86.23% accuracy**, and converted it into .tflite format for fast, offline predictions on mobile devices.

### E-Commerce Web Application

Sep 2024 – Dec 2024

- Built an e-commerce web application using **Java** (Spring Boot) and **Node.js** for backend services, supporting user registration, product browsing, cart management, and order placement within an MVC architecture.
- Developed **RESTful APIs** for seamless communication between frontend and backend components, handling cart operations, product updates, and order processing workflows.
- Utilized** PostgreSQL for structured data storage of users, products, and transactions, and optimized **SQL** queries for reliable and efficient database access.
- Enhanced the UI using JSP, HTML, CSS, and JavaScript, and contributed to unit testing, bug fixes, and version control with **Git** to ensure maintainability and readiness for deployment.

### CryptCloud+: Secure and Expressive Data Access Control for Cloud Storage

Jan 2023 – May 2023

- Spearheaded the development of a secure cloud storage system using **Java** and **CP-ABE**, enabling revocable access, white-box auditability, and traceability to safeguard against unauthorized data exposure.
- Implemented advanced encryption schemes **ATER-CP-ABE** and **ATIR-CP-ABE**, achieving **98.74%** precision in enforcing fine-grained access control and user-level accountability.
- Orchestrated backend services and RESTful APIs for secure file upload, secret key management, role-based access control, and policy enforcement within a modular architecture.
- Employed PostgreSQL for encrypted data storage, maintained MVC code structure, and ensured maintainability, scalability, and clean versioning through Git-based workflows.

## CERTIFICATIONS

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- Google Cloud Digital Leader Certification – Google
- Microservices – LinkedIn Learning
- Learning REST APIs – LinkedIn Learning