KALKIVARTHA B

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PROFESSIONAL SUMMARY

B. Tech graduate (2026) in AI & Data Science with a strong foundation in Java, SQL, Data Structures, and IoT systems. Hands-on experience building real-time applications, applying ML models (SVM), and working with Docker, Git, and AWS. Familiar with software engineering principles, cloud infrastructure, deployment pipelines, and security best practices. Eager to contribute to collaborative, agile squads.

TECHNICAL SKILLS

Languages: Java (Advanced), SQL, C

Databases: SQL Server, SQL Workbench; relational data modelling and query optimization

Cloud & DevOps: AWS, Docker, Git, GitHub, CI/CD Pipelines (GitHub Actions)

Concepts: OOP, DSA, DBMS, Computer Networks, IoT, Machine Learning (SVM), Security Best Practices

Tools: IntelliJ IDEA, NetBeans, macOS/Linux

PROJECTS

IoT-Based Vehicle Wiring Fault Detection & V2V Communication 2024 – Present

Java | ESP32 | SVM | BLE/Bluetooth | Docker | Git | AWS

- Built real-time IoT fault monitoring for commercial vehicles using ESP32; developed Java application for alert generation, data visualisation, and reporting.
- Applied SVM predictive maintenance model to detect wiring failures proactively; managed data model design and query optimisation for fault logs.
- Engineered Vehicle-to-Vehicle (V2V) communication using BLE/Classic Bluetooth (RFCOMM/GATT); containerised deployment via Docker and CI/CD with GitHub Actions.

Java Keystroke Dynamics Authentication System 2023 – 2024

Java | SQL | Behavioral Biometrics | Security

- Developed Java authentication system using keystroke dynamics (dwell time, flight time) as a behavioral biometric security layer with SQL-backed user profiles.
- Applied security best practices: input validation, secure data storage, and continuous identity verification to prevent unauthorized access.

EDUCATION

B.Tech – Artificial Intelligence & Data Science | CGPA: 9.16 2022 – 2026

Vel Tech Multi Tech Dr. Rangarajan Dr. Sakunthala Engineering College, Chennai

HSC – Computer Science 79.8% | SSLC 75.4% 2019 – 2022

Raj Matriculation Higher Secondary School, Mayiladuthurai

INTERNSHIPS

Engineering Monk – New Product Development | Chennai Dec 2024 (15 days)

- Worked hands-on with Raspberry Pi and ESP32; learned IoT architecture, embedded systems, and deployment pipeline fundamentals.

Retech Solutions Pvt. Ltd. – AI Intern | Chennai Mar 2024 (15 days)

- Implemented core AI/ML algorithms; explored supervised learning models and real-world AI applications.

CERTIFICATIONS & ACHIEVEMENTS

Java Advanced – CASS, Avadi (75 days) | C Programming Diploma – Apple Education (65 days) | 30+ HackerRank problems solved | KHO-KHO Men's International Championship Winner, Nepal 2021