

ABEY JOSHY

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SUMMARY

Software Engineer with professional experience designing, developing, testing, deploying and supporting large-scale mission-critical systems, with hands-on experience in Node.js, C#, C/C++, REST APIs, SQL, NoSQL, cloud and distributed systems. Skilled in the full software development lifecycle, Agile/Scrum development, with practical expertise in translating operational and stakeholder needs into system solutions. Recently completed an MSc in Information Systems (First Class Honours) from University of Galway.

EDUCATION

Master of Science in Information Systems Management Sep 2025 – Sep 2026
University of Galway – First Class Honours (1:1)

Relevant Modules: Cloud Computing, Web Design & Development, Database Systems, Business Applications Programming, Systems Development & Project Management, Interactive Systems Design, Advanced Programming for Business Analytics

Bachelor of Technology (Honours) in Electronics and Communication Engineering Aug 2018 – Aug 2022
APJ Abdul Kalam Technological University – 86.7%

SKILLS

Programming Languages: JavaScript, Node.js, Python, C#, .NET, C/C++, Java

Backend & Development: REST APIs, Backend Development, Distributed Systems, API Integration, Object-Oriented Programming, Software Design, System Design, Git, RabbitMQ, Kafka

Databases: SQL, PostgreSQL, MongoDB, NoSQL

Cloud & Infrastructure: AWS, Microsoft Azure, Linux, Docker, CI/CD, GitHub Actions, VMware ESXi, vCenter, Networking Fundamentals, TCP/IP, DHCP, WebSocket

Testing, Delivery & Practices: Software Testing, Performance Testing, Debugging, Root Cause Analysis, Agile, Scrum, SDLC, Code Review, Load Testing, Apache JMeter

Professional Skills: Stakeholder Communication, Cross-Functional Collaboration, Technical Documentation, Problem Solving, Analytical Skills, Team Collaboration

PROFESSIONAL EXPERIENCE

Centre for Development of Advanced Computing (C-DAC) Feb 2023 – Aug 2025
Software Engineer Kerala, India

- Reduced location-fetch time by up to 80% by integrating Google Emergency Location Service (ELS) into the Emergency Response Support System (ERSS-112) for precise caller positioning across 25+ Indian states.
- Engineered a centralised ELS server and scalable backend modules using Node.js, MongoDB, RabbitMQ across multiple micro-service components, reliably processing 200+ location data per second during initial rollout.
- Enhanced ELS backend performance by 200% by investigating performance bottlenecks, optimizing database queries, server configuration, and validating results with Apache JMeter to sustain 4,500+ req/sec.
- Strengthened operational visibility by building a Grafana-based dashboard to monitor ELS server health and message throughput across a 3-node distributed configuration.
- Improved caller location accuracy by 83% by integrating the WhatsApp Business Platform collaborating with multidisciplinary teams to automate caller data collection along with precise GPS-based location data.

- Maintained high availability across 30+ virtual machines per state by managing Linux infrastructure using VMware ESXi, vCenter including configuration, load balancing and network troubleshooting.
- Shortened deployment time by 75% by maintaining accurate, step-by-step technical documentation to clearly communicate procedures for system configuration, deployment and troubleshooting steps.
- Enabled successful adoption of new systems by clearly communicating with stakeholders, delivering on-site installation, configuration and technical training for ERSS-112, Women Helpline and Child Helpline projects.

PROJECTS

SPHERE – Secure Patient Health Record Exchange (Major Research Project)

Project Title: A Cloud-Based Interoperable Electronic Health Record (EHR) and Health Information Exchange (HIE) Framework with Integrated Cybersecurity for Reducing Healthcare Data Fragmentation

- Designed a 5-layer framework for regulated healthcare data exchange to solve interoperability challenges.
- Built a working prototype with 2 EHR systems and patient portal using Node.js, MongoDB and PostgreSQL, with HL7 FHIR translation for interoperable data exchange.
- Implemented role-based access control (RBAC) and audit logging to govern record access, supporting incident tracking and compliance in a regulated healthcare data environment.

ShiftFlow – Cloud-Based Full Stack Workforce Scheduling Application

- Led end-to-end deployment of a serverless full stack application on AWS, working independently to design and implement system architecture.
- Hosted the frontend on S3 with CloudFront and backend services through AWS Lambda and API Gateway
- Implemented a CI/CD pipeline with GitHub Actions to safely automate build, test and deployment.

Point of Sale (POS) System – C# .NET Application

- Created a Windows Forms desktop application for product management, billing and transaction processing.
- Prioritised code reliability, stability and usability for everyday users.

IoHT-Enabled Real-Time Patient Monitoring System

- Prototyped a real-time patient monitoring system tracking 3 vital signs using non-invasive sensors.
- Incorporated an integrated gesture-based room automation system for bedridden patients using OpenCV.

CERTIFICATIONS

AWS Cloud Practitioner (CLF-C02) - Datacamp	Feb 2026
Microsoft Azure Fundamentals (AZ-900) - Datacamp	Feb 2026

ACHIEVEMENTS

Employability Award - University of Galway	Dec 2025
• Awarded by the Career Development Centre for completing 40+ hours of work experience alongside employer-led skills workshops, careers events and interview preparation.	
Erasmus+ Blended Intensive Programme (BIP) - University of Antwerp, Belgium	May 2026 – Jul 2026
• Represented the University of Galway in a Leadership Development programme, collaborating with students from universities across the world.	

ADDITIONAL INFORMATION

Work Permission

Eligible to work full-time in Ireland under **Stamp 1G** immigration permission.