

AKBAR MOHAMMED

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SUMMARY

Master's graduate in Computer Science and emerging Software Engineer with practical experience in full-stack development, backend automation, and agile team collaboration. Skilled in delivering scalable solutions and optimizing performance across diverse projects. Driven by a passion for technology and problem-solving in real-world applications.

EDUCATION

Pace University, Seidenberg School of Computer Science and Information Systems Dec '24
Masters of Science (MS) in Computer Science | GPA: 3.7/4

Osmania University, Muffakham Jah College of Engineering and Technology Jun '22
Bachelor of Engineering (BE) in Electronics and communication | GPA: 8.61/10

TECHNICAL SKILLS

Programming & Scripting: Python, JavaScript (Node.js, Angular), SQL, Java, Kotlin, Bash

Web & Mobile Development: React.js, Html5, CSS3, Firebase, Jetpack Compose

DevOps & Cloud: AWS (EC2, S3, IAM, VPC), Docker, Kubernetes, Terraform, Ansible, Jenkins, Github Actions, Gitlab CI/CD

Embedded & Linux: Yocto Project (Bitbake, meta-layers), Cross-compilation, HIL Testing, Ubuntu, Windows

Testing & Security: PyTest, Unit Testing, Coverity, Blackduck, SonarQubem Vulnerability scanning

Version control & Collaboration: Git, Github, Jira, Agile/Scrum

Monitoring & Logging: Prometheus, Grafana ELK Stack

WORK EXPERIENCE

Software Engineer | MARS TECHNOMINDS INC | New York, United States (Feb '25 - Present)

- Collaborated with the development and DevOps team to design, write, and maintain efficient code, production-ready code.
- Set up and optimize CI/CD pipelines with Jenkins and Github Actions for faster and more reliable deployments.
- Built and customized Yocto-based embedded Linux images (Bitbake, meta-layers) for Iot and edge devices.
- Containerized applications with Docker and orchestrated deployments on Kubernetes, reducing downtime.
- Automated infrastructure provisioning on AWS with Terraform and Ansible, enabling scalable cloud environments.
- Implemented automated testing (PyTest, HIL simulations) and integrated Coverity, Black Duck, and SonarQube for quality and security scanning.
- Deployed Prometheus, Grafana, and ELK Stack for monitoring, logging and performance analysis across systems

Trainee Developer | A3 RCM HEALTHCARE PVT LTD | Hyderabad, India. (Dec '21- Jan '23)

Tools: Python, SQL, ICD-10 Coding, JavaScript, React, Data Visualization, Database Management

- **Automated Coding Audit Tool** | Used Python for automation and SQL to query large datasets for coding discrepancies. The project was challenging due to the complexity of working with large datasets and ensuring the accuracy of automated audits in a healthcare context. Successfully reduced manual review time by 50%, improving efficiency and minimizing errors in audit.
- **Clinical Documentation Improvement (CDI) Dashboard** | Integrated SQL queries for real-time data processing and displayed key metrics on the dashboard. The project had scope for improvement in the user interface and data processing speed, which could further enhance user experience. Despite this, the dashboard enabled clinical teams to better track documentation errors and improve quality.
- **Data Integration for Risk Adjustment** | Used Java and FHIR standards to ensure smooth data exchange between systems. The project had some technical challenges in handling multiple data formats, but was successfully completed. It streamlined the risk adjustment process, improving the timeliness of patient assessments and ensuring more accurate reimbursement.

PROJECTS

[Task-Genie](#) | Python, JavaScript, SQL | (Aug '24 – Dec '24)

- Developed a service booking platform using Python (Django/Fast API) with PostgreSQL for database management, enabling seamless user authentication, booking, and payments.
- Automated CI/CD pipelines with Jenkins, reducing deployment time by 40% and minimizing manual errors.
- Managed sprints and issue tracking using JIRA, ensuring structured development and timely feature releases.
- Improved system reliability with automated testing, enhancing performance and reducing post-deployment issues.

Well-Spring | Kotlin, DBMS, Firebase, Jetpack Compose |

(Jan '24 – May '24)

- Created Wellspring, an Android app that helps students track moods, analyse trends, and access mental health resources.
- Implemented mood tracking, journaling, statistical analysis with charts, and integration using Firebase and 3rd party libraries.
- Provides students with an easy-to-use tool to monitor well-being, recognize emotional patterns, and access support resources.

Smart City Traffic Monitoring System | Ionic React, Capacitor, JavaScript |

(Jan '24- May '24)

- Developed a real-time traffic monitoring system leveraging geolocation and device motion data to track traffic flow, vehicle speeds, and congestion.
- Created a cross-platform PWA for web and mobile, with live data visualization and push notifications for users.
- Enhanced route planning and road safety by providing traffic updates and accident alerts to users.

Smart Water Management System | IoT, Arduino, NodeMCU, Embedded Sys |

(Jan '22 – Jun '22)

- Used wireless sensors to automate irrigation for agricultural fields based on crop water requirements and environmental conditions.
- Integrated sensors to monitor soil moisture and rainfall, with data sent to Arduino for real-time decision-making, ensuring optimal water usage.
 - Dynamic irrigation system that automatically adjusts water levels based on sensor data, enhancing efficiency and reducing water waste.
 - Rainwater overflow mechanism, where excess water is drained when rainfall surpasses a certain threshold, preventing crop damage.

ACHIEVEMENTS

- J-HUB Hackathon League Secured 2nd position at the national level hackathon organized by JNTU Hyderabad. **Feb '20**
- Interviewed Dr. APJ Abdul Kalam, The Late Former President of India. **Feb '13 | Hyd**
- Smart water management PRINCETON PRESS - USA ISBN: 978-920-5-520222-8. **Jun '22**
- POLYCET Rank Holder | State Rank 210. **2013 | AP & TS | Hyd**
- Talent Search Examination by IQBALIA Jr College | Secured 2nd rank at the city level. **Mar '16**
- Head Boy of Secondary School. **2016**
- Chief Minister Merit Overseas Scholarship | For top 200 students in TS State. **2023 | Hyd**

COURSE WORK

Data Structure & Algorithms Python, Java, Parallel Computing, Database Management Sys, Internet Computing, Mobile Apps Development, Mobile Web Development, Security in Comp Networks.

HOBBIES AND INTRESTS

Train at a gym, Swimming, watching movies, Hang out with friends.