MAYUR DOKRAS

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Professional Summary

Software Engineer with 3 years industry experience and currently pursuing MSc in Software Engineering (University of Southampton). Experienced in mobile application development (Flutter/Dart, Swift), embedded systems (C/C++), Python scripting for automation and troubleshooting, and integration with RESTful APIs and scalable backend services. Proven ability in debugging, system design, test automation, CI/CD pipelines and Agile software delivery. Passionate about building secure, high-performance applications and delivering measurable product improvements.

Relevant Work Experience

Backend Developer Intern   *University of Southampton*
February 2025 - July 2025

- Integrated RESTful APIs for UK Gov. data consumption adhering to GDPR compliance requirements and data protection regulations.
- Collaborated with cross-functional team to design secure backend architecture, implement data pipelines and deployed production-ready services for Malvox.com.
- Implemented authentication, authorization, rate limiting, and encryption protocols to ensure secure API endpoints and user data protection also developed a Browser plugin for Malvox.
- Successfully deployed website to production environment, conducted performance testing and maintained CI/CD pipeline for continuous integration and delivery.

Associate II - Software Engineer   *Capgemini Engineering*
November 2021 - November 2024

- Developed 15+ client side features and resolved 40+ production defects using Python automation scripts. Worked on GPON technology with C/C++ programming and Linux/Unix system administration on virtual machines (VMs). Improved system performance by 25% by working on CFM and CCM protocol.
- Collaborated with cross-functional R&D teams to design and develop software on IoT chipset solutions for smart home automation using embedded C programming, microcontroller development for iOS application development and firmware optimization also delivered 3 major product releases.
- Participated in the Agile/Scrum development lifecycle, including daily standups, sprint planning, code reviews, and retrospectives; utilized Git version control, CI/CD pipelines (Jenkins) and DevOps practices to maintain code quality standards and achieve zero deployment failures.
- Executed comprehensive debugging, integration testing and system troubleshooting using debugging tools (GDB, wireshark) and monitoring solutions. Reduced mean time to resolution (MTTR) by 25%.
- Implemented software development best practices including test-driven development (TDD), pair programming, technical documentation and knowledge transfer sessions and contributed to team productivity improvements.

Freelance Mobile Application Developer   *Self Employed*
February 2021 - October 2021

- Designed and developed native and cross-platform mobile applications using Flutter/Dart and Swift, integrated with RESTful APIs and scalable backend services (Firebase) for production deployment.
- Built e-commerce, grocery delivery and fitness instructor applications with responsive UI, local persistence, offline support and secure user authentication (JWT/OAuth2).
- Managed full software development lifecycle: requirements analysis, system design, implementation, unit and integration testing, CI/CD deployment, and production maintenance.
- Implemented secure coding practices, input validation, and authentication mechanisms to meet client security and business requirements.

Education

MSc in Software Engineering   *University of Southampton, UK – 2024/25*

- Completed master's dissertation: Link2Feed, a full-stack Android mobile app using Kotlin, Jetpack Compose, Material Design 3, and REST APIs; integrated UK Gov APIs (Charity Commission, FHRS) for verification, implemented Firebase backend (Firestore/Realtime DB, Cloud Functions, Authentication, Cloud Messaging), built geolocation filtering (50 km radius) and a fair allocation algorithm; applied secure SDLC, TDD, and CI/CD for scalable, reliable delivery. Now, Developing an iOS application using Swift with shared Firebase backend, scheduled for UK App Store launch.

- Second semester: developed Ed-Tech mobile app using Kotlin, Jetpack Compose, and Material 3 for modern UX; contributed to fitness-focused web app in 3-member team with focus on front-end, API integration, and cloud deployment using Next.js and Firebase.
- First semester modules (Software Project Management, Automated Software Testing, Critical Systems) provided foundation in project planning, secure software development, and test automation; applied throughout projects and dissertation work.

Bachelor's in Information Technology (CGPA: 6.99) *AISSMS IOIT, India – 2018/20*

- Final year project: *Image Re-Ranking Based on Topic Diversity* — enhanced search result relevance using JavaScript, PHP, MySQL, HTML, CSS deployed on Tomcat server; incorporated Hash Map Algorithm to improve image processing and ranking efficiency.
- Published research paper: *Study on Image Processing Based on Topic Diversity* exploring advanced techniques for image search relevance and categorisation.

Diploma in Information Technology (Percentage: 73.18%) *RIT Polytechnic, India – 2015/17*

- Final year project: Steganography system using Java and Least Significant Bit (LSB) algorithm — enabled secure message embedding within images while maintaining image quality and ease of use; ensured data confidentiality.

Workshops and Engagement

University of Southampton, UK

- Presented Dark Web risks: Tor/I2P overview, Silk Road case study (operation and FBI take down), ransomware-as-a-service, credential stuffing; outlined organizational impacts (data breaches, brand risk) and concise mitigation (dark-web monitoring, threat intelligence, incident response, employee training).

AISSMS IOIT, India

- Delivered a guest lecture on Mobile Application Development to 3rd year Bachelor's students. Demonstrated a live Flutter/Dart calculator app (UI widgets, event handling, state management), explained widget layout concepts (Column, Row, constraints).
- Covered database selection criteria (relational vs NoSQL, Firebase, PostgreSQL) and scalability strategies (horizontal vs vertical scaling), and engaged 40+ students with practical examples and architecture best practices.

AISSMS IOIT, India

- Delivered a guest lecture on Mobile Application Development to 3rd year Bachelor's students. Demonstrated a live Flutter/Dart calculator app (UI widgets, event handling, state management), explained widget layout concepts (Column, Row, constraints).

Projects

Image Re-Ranking Based on Topic Diversity *Bachelor's Project*

- Developed an image processing web application during undergraduate studies using JavaScript, PHP, MySQL, HTML/CSS with Tomcat deployment, integrating Hash Map algorithms to optimize performance. Analyzed search engine hashtag limitations using PageRank algorithm methodology and researched platforms like Flickr to enhance search accuracy and retrieval efficiency.

MackFit Workout Application

- Developed the 'MackFit' mobile application using Flutter and Dart, ensuring full functionality aligned with client requirements. Implemented JSON for efficient local storage and integrated Firebase for seamless hosting and deployment, optimizing performance and scalability.

Skills

- Technical skills : C, C++, Python, Java, ReactJS, Kotlin, Swift, Jetpack Compose, Dart, JSON, UI Design
- Soft Skills : Team Leadership, Team Player, Quick Learner, Problem Solving, Patient Listener
- Tools: Android Studio [intermediate], Visual Studio [intermediate], Xcode [intermediate], Figma [intermediate], AWS[begineer], Firebase[intermediate], draw.io [expert]

Certifications

- Java Object-Oriented Programming (Linkedin 2021)
- Amazon Web Service S3 Bucket (Coursera 2021)
- Agile Software Development (Coursera 2022)
- Dart Functions Framework (Google Cloud 2023)
- Cloud Computing (IBM 2023)