

APPU M

Software Development Engineer

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Summary

Dynamic Software Development Engineer skilled in full-stack development and cross-functional team collaboration. Recognized for leading projects from concept to deployment using Flutter, Dart, and Python, with a keen emphasis on user experience and scalable solutions. Adept at translating business requirements into high-performing digital products.

Experience

Herin Electronics

Software Development Engineer

01/2025 - Present

Engineers scalable applications using Flutter, Dart, Python, and SQL, with expertise in backend systems and real-time IoT data processing. Implements user-centric features and optimizes database performance to enhance application adoption and efficiency.

- Developed and optimized scalable software solutions, **strategically delivering applications that enhanced performance and reliability**.
- Collaborated with hardware teams for seamless device integration and data handling.
- Led development of end-to-end IoT applications, enhancing user experience through features like task management, reminders, ads, and subscription models-driving adoption and revenue growth.

Application Engineer

01/2023 - 01/2025

Developed engaging cross-platform applications with multimedia support and optimized app performance through SQL query tuning and scalable database design. Created real-time IoT dashboards, reducing report generation time and enhancing data accuracy.

- **Engineered comprehensive cross-platform applications** featuring rich multimedia support (audio, video, PDFs), video streaming, real-time chat, and drip-feed content delivery, enhancing user engagement via **notifications and deep linking**, achieving 5,000+ downloads.
- Enhanced app performance through SQL query optimization and scalable database design for high traffic. Implemented robust features including real-time payments, session management, and user profile maintenance, leveraging Bloc for state management and ensuring offline readiness.
- **Developed real-time IoT dashboards** with serial port data acquisition and live data visualization, significantly reducing report generation time and enhancing data accuracy by 30%.

Skills

Programming & Databases : Flutter, Dart, Python, SQL

Database Design & Optimization: Scalable schema design, complex SQL queries, performance tuning

Architectural Design: MVVM, Clean Architecture, modularization, separation of concerns, reusable components

Backend Development & APIs: RESTful APIs, JSON serialization/deserialization, Postman, Firebase Cloud Messaging.

Deployment & Operations: App deployment to Play Store & App Store, Apache server configuration, deep linking implementation

Projects

Cross-Platform Streaming App (Android & iOS)

- Engineered a cross-platform mobile application offering robust multimedia streaming capabilities, including optimized performance and a smooth user experience
- Integrated RESTful APIs, Firebase Cloud Messaging (FCM), and deep linking for real-time updates and direct content access
- Designed an intuitive UI with dynamic routing, gesture support, and scalable state management, enhancing responsiveness and maintainability

Advanced Metrology Calibration Suite

- Developed a full-stack application automating high-precision calibration of multimeters, oscilloscopes, and calibrators. This included real-time measurement monitoring and efficient Excel report generation.
- Supported both GUI and CLI modes for versatile user interaction and seamless integration into enterprise and Flutter-based ecosystems.

IoT Dashboard for Data Management

- Engineered a real-time IoT dashboard, integrating serial port data acquisition with dynamic live data visualization capabilities.
- Significantly reduced report generation time by 30% and enhanced data accuracy, supporting better client decision-making through an interactive and responsive UI.
- Features **automated report generation and scheduled email delivery**, significantly reducing reporting time and enhancing data accuracy.

Projects

PDF Text Extraction and Validation System

- Developed a desktop application to extract and validate data from calibration PDF reports against a local database.
- Automated validation of calibration results, including date checks, unit consistency, and certificate authenticity.
- Integrated locally hosted **Gemma 3.7b LLM** for intelligent error detection, data summarization, and certification verification.

Education

Karnataka State Open University	2023 - 2025
Master of Computer Applications GPA: 8.3 / 10	
Davanagere University	2019 - 2022
Bachelor of Computer Applications GPA: 8.9 / 10	