Norman Ligums Clark

Fort Lauderdale, FL | nalc4991@yahoo.com | +1(908)581-6896
github.com/sblingfun | linkedin.com/in/nlc9 | sblingfun.github.io/normanlc.dev

Summary

Results driven Software Engineer with experience in embedded and full-stack development. Strong problem solver with a focus on clean code, performance, and collaboration. Passionate about delivering high-quality software that improves user experience and business results in accordance with a highly regulated design process.

Work Experience

Sensus Healthcare February 2024 - present

- *Developed and maintained embedded firmware for microcontroller based devices using C/C++*
- Implemented accurate dosing detection in device handpiece by installing motor encoder and Hall effect sensor peripherals and developing firmware to monitor syringe location and output
- Designed comprehensive unit, integration, and system level tests and validated testing software
- Created stubbing framework to expedite testing process resulting in significant time savings
- Designed and optimized low level drivers and custom communication protocols for device subsystems
- Performed board bring-up, debugging, and testing using oscilloscopes and logic analyzers
- Designed and executed verification and validation tests and procedures to prove system safety
- *Developed native full-stack Android applications using Java, Android SDK, and Android Studio*
- Performed app profiling and debugging using ADB, Logcat, and Android Profiler to improve performance
- Built intuitive and responsive UIs using XML layouts, Material Design, and custom views
- Managed local data storage using SQLite, Room, SharedPreferences, and caching strategies
- Utilized Android components (ViewModel, LiveData, Room) to improve maintainability and performance
- Published builds using Gradle, managed signing/versioning, and handled controlled OTA releases
- Designed and implemented SQLite/Room database including ERDs, ORMs, DAOs, and unit tests
- Resolved support tickets via managing MySQL, reading log files, and performing live hot-fixes
- Completed regulatory documentation on system architecture, cybersecurity, risk management, and other topics
- Produced proof of concept for EERAM storage of x-ray radiation timers using STM32 MCU
- Built custom multi-seat Linux configuration using Docker to ensure consistent development environment
- Completed IEC 60601-1, IEC 62304, ISO 14971, FDA, MDR, and HIPAA compliance training

Castle Group April 2023 - February 2024

- Maintained C#, ASP.NET, .NET, and .NET core codebase, monitoring deployment, submitting pull requests, managing CI/CD deployment pipeline, and updating NuGet package dependencies in Azure DevOps
- Debugged microservice architecture using Elasticsearch and RabbitMq to increase system up-time
- Developed and managed application for handling employee status change requests
- Interfaced with REST and SOAP APIs making HTTP requests to exchange data between applications and databases including reading and manipulating both JSON and XML
- Maintained MS SQL Server Database, including writing complex queries and managing database objects
- Solicited requirements from company staff, organized unit testing environments and developed unit tests for key functionalities, and worked to incorporate feedback to improve user experience for multiple internal applications.

Projects

RAG LLM Document Analyzer

Developing a native program to allow uploading of documents for parsing, indexing, and embedding, to enable the augmenting of user queries to send to a locally run LLM, enhancing the output while preserving privacy.

Education

2023 B.S. in Computer Engineering and Computer Science from **Rutgers University - New Brunswick**

Skills

Languages	Java, C/C++, C#, Python, SQL, JavaScript, Bash, Assembly(x86, ARM)
Software	Git, Linux, Gradle, Java Spring, JavaFX, JUnit, Pandas, Matplotlib, Scikit-learn, TensorFlow, Flask, Docker, Jira, Azure, MySQL, MS SQL Server, Visual Studio, Android Studio, STM32CubeIDE/MX, PyCharm, Postman, SQL Workbench, Draw.io, PlantUML, Microsoft Office, PowerBI
Hardware	FPGAs, STM32, Arduino, MCUs, Motor/Motor Encoder, Hall effect sensor, UART, SPI, I2C, RTC, DAC, ADC, GPS, Camera, LCD Back light, EEPROM, EERAM, Temp/Light/Impact Sensors