

Software Engineer:
Smartphone App Development with Focus on High Performance Algorithm Implementation

Location: Remote. Immediate Start
1st position: Software Engineer – Android App development oriented

Abingdon Health is mobilising its rapid test operations to scale-up the deployment of rapid diagnostic solutions in response to the global COVID-19 outbreak. Due to significant demand for our services we are recruiting for experienced personnel to join our team immediately.

Abingdon Health is a global leader in the contract development and manufacture of lateral flow rapid tests and reader systems, working on behalf of clients across many industries. Our instrumentation and app development team have developed benchtop readers and Smartphone based next generation reader technology, such as Abingdon Health's AppDx[®] platform. AppDx[®] uses proprietary technology to enhance rapid test results to make monitoring simpler, faster, low-cost, and traceable. AppDx[®] is a game changer in rapid-testing, with its ability to capture complimentary data such as GPS mapping, patient ID and date stamping for analysis in a central cloud or data-hub. Thus, allowing stakeholders to access and analyse data as part of a streamlined diagnostic process for improved and faster outcome management.

Our team offers you the opportunity to work on tackling challenges in the real world which have a direct impact on our health, environment, and the entire world. You will get to experience business processes not only in software development but also in quality assurance, management, and diagnostics technical domains. You will develop and learn new skills and techniques and gain tangible experience working in a highly multidisciplinary environment.

Job description

Primary Duties and Responsibilities

- Design and develop high-performance, high-accuracy and high-quality software for measuring lateral-flow tests on smartphones
- Deploy the algorithms on a smartphone platform, Android or iOS
- Setup CI/CD pipelines or alternative build systems
- Performance optimisation and adaptive architecture design
- Design, plan, implement unit testing, integration testing
- Help setup software development, testing and V&V processes for smartphone app development
- Create reports on experiments, testing and issues using a structured and scientific approach
- Analyse and understand the capability, limitations and requirements of smartphone platform and complement our team
- Work within an interdisciplinary team for product development
- Develop testing and validation processes around developed app
- Good technical and software documentation around software development
- Work with external software development teams for technology integration
- Work within the company's quality management system for new product development
- Work within project management/administration processes

Essential Training and Technical Competency

- Graduate or post-graduate degree in Computer Science, Information technology, Physics, Mathematics, or equivalent domains
- Bachelors candidates must have 3+ years' experience in developing smartphone applications within an industry or research environment or equivalent experience of personally developed

apps showcase, or as self-employed developer (however solely forking and building the open source sample apps unfortunately wouldn't be considered as appropriate experience)

- Strong programming skills and experience in Java/Kotlin for Android or Swift programming language for iOS
- Experience with performance analysis and memory optimisation using development environments for Android or iOS
- Flair for benchmarking and optimization
- Proficiency using Git version control system, (UI based or command line)
- Good programming skills in Python. Experience working with Jupyter Notebooks and mid-size or larger Python projects
- Solid Knowledge of Object-oriented Design, Object-Oriented Programming
- Understanding of SOLID principles and software architecture design patterns
- Proficiency in using Microsoft Office: Word, Excel and Power Point
- Proficiency in English, both spoken and written

Specific requirements for Android App Development:

- Understanding of interfaces, abstract classes, multi-threading
- Android libraries, packages, Code Obfuscation
- Android SDK knowledge, especially Camera2 API or CameraX API
- Experience supporting Android phone variants for UI layout
- JAVA Native Interface (JNI) within Android studio
- Able to write wrappers, Gradle build scripts

Personal Qualities

- A proactive attitude, a desire to research and solve problems and create solutions
- High level analytical capability, and ability to communicate complex information clearly
- Demonstrable excellence in problem solving within fixed timelines
- Flexibility and the ability to effectively work on multiple concurrent projects
- Ability to work within multidisciplinary team of developers, scientists, engineers

Desired (in the order of priority)

- Demonstrated skills to implement real time image processing algorithms on smartphone platforms Android or iOS
- Prior experience working in a regulated environment (such as ISO 13485/IEC 62304 or equivalent)
- Knowledge of professional software engineering practices and best practices for full software development life cycle, including coding standards, code reviews, source control management, continuous deployments, testing, and operations

For all enquiries concerning career opportunities please email recruit@abingdonhealth.com with Curriculum Vitae (CV).