Jon Poulton

Android Software Engineer

Bristol – UK

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Key Skills

- Self-taught Android Engineer with hands-on knowledge of the full development lifecycle of commercial software: requirements, design, UX, prototyping, rework, integration, bug-fixing, testing (unit, instrumented, integration and system), delivery, training, documentation and maintenance.
- Acted as lead developer on several Android-based defence software projects
- Strong experience with on-the-soldier systems, both from a software and a systems perspective
- Provided mentoring and technical support to many newer engineers during their early careers, helped to familiarise them with the Android framework and software engineering as a whole
- Experienced with handling customer interactions, including clarification of requirements and constraints, delivering demonstrations and taking feedback.

Key Technologies

- **Android:** Kotlin, Java, Android SDK, Coroutines/Flows, Retrofit, Dagger/Hilt/Koin, Room/SQLite, Gradle, Material Design, JUnit, MockK/Mockito, Espresso/Kaspresso. MVVM/MVI/MVP architectures.
- **Python:** Flask, SQLAlchemy, PyYAML, Pytest, API design, state management
- **Web:** Javascript, HTML, Vue.JS
- **C/C++:** CUDA, Unreal Engine, Make
- **Other:** Git, GitLab, GitHub Actions, Maven, JIRA, Matlab. Comfortable with both Windows and Linux development environments. Built a strong functional knowledge of IP networking and configurations.

Experience

Rowden **Bristol**

Senior Software Engineer *Sep 2023 - Present*

- Developed and maintained suite of internal libraries and Gradle plugins to help make development more consistent across projects
- Acted as an Android domain expert at the company - documenting common practices and giving occasional internal talks to make people aware of what can be done with the platform
- Helped to preserve a culture of code quality by introducing mandatory automatic linting and unit test checks for software projects, including custom lint rules to detect common problems
- Supported SREs in maintaining internal GitHub Actions runners - improving the developer's CI experience by introducing caching to drastically reduce build time

Software Engineer *Feb 2022 - Sep 2023*

- Worked on a series of small projects, helping to rework existing applications for new customers
- Developed and delivered a suite of small applications to demonstrate the use of various middleware solutions in Android on-the-soldier systems
- Designed, implemented and iterated a small-scale product for sharing notes over tactical networks. Organised frequent user feedback sessions for UX comparisons and to understand desired functionality

BAE Systems **Christchurch, Dorset**
Systems/Software Engineer *Sep 2018 – Jan 2022*

- Started as a Systems Engineer as part of a small team, moved over time towards full-time Software Engineering due to the project's needs
- Designed, built and deployed several Android applications from scratch based on customer requirements (both formal and informal)
- Managed a small-scale CI pipeline for the team to run automated test suites and store build outputs
- Integrated the apps with several pieces of third-party hardware/software and ran end-to-end tests to ensure continuous functionality throughout development
- Directly supported software adoption and training programmes by presenting the delivered system to users, administrators and maintainers
- Gained experience with managing stakeholder relationships internally and externally - handling technical questions, discussing feature roadmaps and timelines and dealing with ad-hoc issues
- Experienced with documenting the developed software, including general usage, configuration and expected behaviours under stress

Toshiba Medical Visualisation Systems (now Canon Medical) **Edinburgh**
Intern *Summer 2017*

- 12-week internship project investigating the plausibility of HDR display output in medical imaging products
- Used C++ via DirectX 12 and new (at the time) HDR display features in Windows 10
- Used Git and common development tools via Visual Studio as part of an existing team

Astronomy Technology Centre **Edinburgh**
Intern *Summer 2016*

- Summer project developing a Windows application for viewing 3D data files in an Oculus VR headset
- Used C++ and the Unreal Engine alongside several third-party libraries
- Ended with a functioning prototype taking advantage of the platform's unique properties

Master's Project

University of Edinburgh
Supervisor: Dr Eric Tittley *Sep 2017 – Apr 2018*

- Used C/C++ and CUDA to improve an ongoing simulation of the early universe's reionisation process
- ~90% of the running time came from many thousands of small and repetitive integrals on each iteration, so improving efficiency of these functions was paramount
- Main task was to integrate GPGPU parallel methods to spread these integrals over many hundreds of threads at once, vastly improving the running time and power usage
- Generated plenty of data to analyse, visualise and investigate patterns/relationships, which included catching some key functional bugs that had been hidden from multiple other students over several years

Education

University of Edinburgh
MPhys Astrophysics *2013 – 2018*
1st class degree. Courses include: Software Development, Statistical Physics, Computer Modelling, Thermal Physics, Fourier Analysis and Statistics, Numerical Recipes, Computational Astrophysics, Telescope Research.

References

Available upon request.