

Daniele Della Cioppa

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Education

ITIS

IT Engineer Computer Science

30/05/2008

Caserta, IT

ACL ESSEX

Lvl 3 IT SolTech Software Development

22/06/2023

Brentwood, UK

Work Experience

Akhter Computers

Software Developer

December 2021 – Present

Harlow Town, UK

Architecture and App Structure

- ▶ *Dependency Injection:* I'm using Dagger Hilt for dependency management within the application. This is not only to simplify dependency management but also to promote testability and scalability of the code.
- ▶ *MVVM and LiveData:* Adopting the MVVM (Model-View-ViewModel) pattern along with LiveData to focus on separating concerns and building a reactive architecture that enhances UI state management by responding to data changes.
- ▶ *Compose UI:* My use of Jetpack Compose for the UI is simply to adopt the latest Android libraries for building a declarative, modern, and high-performance user interface.

App Functionality

- ▶ *User Profile and Configuration Management:* I'm developing systems for managing user profiles and app configurations, allowing dynamic changes in the application based on these parameters.
- ▶ *Security and Controlled Access:* Generating code sequences for authentication using security measures to ensure that only authorized users can access certain features.
- ▶ *Device Automation and Control:* In my job I usually deal with "lock task mode," "device policy manager," and package management. This is to implement advanced functionalities for controlling and limiting device usage in specific contexts (MoD, Military, and NHS), such as kiosk mode or for corporate applications.

Testing and Code Quality

- ▶ *Unit and Integration Testing:* At the moment I'm employing a combination of JUnit4, Espresso, and Mockito to write tests covering both the application logic and the user interface interactions, to create reliable code and ensuring app quality. What I don't want is to run manually all the tests which becomes impossible as the system gets bigger.
- ▶ *Static Code Analysis:* I'm using Using detekt for static code analysis. This makes Linter on the Continuous Integration Pipeline even more demanding and gives me a hand in maintaining standards of code quality, readability, and adherence to Kotlin best practices.

UI/UX

- ▶ *Interface Customization:* I'm customizing the user interface, by using composables to manage wallpapers, opacity, and the overall UI layout. This is to improve user experience.

Challenges and Solutions

- ▶ *Resource Management and Packaging:* I'm still tackling specific challenges related to resource packaging and dependency conflict management (e.g., issues with Mockito), resolving complex Gradle build and configuration problems.

Personal Projects

Stargaze Blockchain CardGame

Blockchain and Smart Contracts for Gaming

- ▶ *Exploring blockchain technology, focusing on differences between Proof of Work and Proof of Stake. Developing an understanding of smart contracts to build them confidently in Rust for self-executing actions triggered by Oracles or DApps.*
- ▶ *Technologies Used:* Cosmos SDK, Go for server-side logic, JavaScript and OsmoJS for blockchain interactions.

Wallet Integration and Gaming Applications

- ▶ *Integrating Keplr into Vue.js applications, aiming to utilize smart contracts in gaming for mechanisms like card trading. Imagining smart contract applications in gameplay mechanics.*
- ▶ *Technologies Used:* Vue.js for frontend development, JavaScript for scripting and blockchain interaction.

Mobile Development and Server Management

- ▶ *Exploring mobile app development with Kotlin and Jetpack Compose and managing blockchain transactions via a server setup, simplifying the mobile app's focus on gameplay. The issue here is interacting with Keplr so ideally I'd need an extension installed but Google Android browser doesn't have one. The WebView is not an option as Keplr can be installed only on a Desktop browser. I'm still looking for a solution.*

- ▶ *Technologies Used: Kotlin, Jetpack Compose for Android app development; Python for server setup.*
- ▶ Interactive 3D Scenes and User Experience
 - ▶ *Utilizing Three.js within Vue.js applications to create engaging 3D scenes for games, enhancing user experience.*
 - ▶ *Technologies Used: Vue.js for structuring web apps, Three.js for 3D modeling.*
- ▶ Command-line Interactions and Local Hosting
 - ▶ *Experimenting with curl and command-line tools for blockchain node interactions, exploring local content hosting possibilities with Python.*
 - ▶ *Technologies Used: Command-line tools like curl for RPC interactions, Python for local server hosting.*

Custom Launcher

- ▶ Creating a super simple and minimalistic custom launcher for Android 13. The idea is to significantly improve battery life and make my phone live longer

Skills

Languages Italian, Spanish, Catalan, English, German, Cantonese

Hobbies

- ▶ Jojo Bizarre Adventures.
- ▶ Many many videogames. I'm a big fan of Valheim, Minecraft, and the Souls series
- ▶ Recording a podcast to teach Napolitan. It's called [Speak Napolitano and Survive in Naples](#)
- ▶ Baking (with a focus on sourdough bread and tarte tatin)
- ▶ And obviously loooooong long walks

Android versions

- ▶ I know Android 10 and 13