Smart Testing for Smarter Reality: QA Success for a UK Startup's Augmented Reality App

Client Profile

A UK-based technology startup set out to launch an **Augmented Reality (AR) mobile application** designed to deliver immersive experiences through real-time interaction with virtual 3D objects using mobile screens and AR glasses.

The application is designed for use across various industries, from **engineering and architecture to gaming and education.** It offers users the ability to interact with digital structures, creatures, and data models in real-world environments.

Business Challenge

The client needed a **dedicated QA partner** to validate the performance, accuracy, and user experience of their AR mobile application. With growing user expectations in the UK's tech-savvy market, the client sought to ensure:

- Real-time, lag-free object tracking
- Stability across varying device capabilities
- Seamless performance under changing lighting and movement conditions
- High usability and accessibility for a diverse user base

The application also used **visual markers (like QR codes and image targets)** to render 3D models and required precision in marker recognition across devices, camera types, and environments. This called for **deep testing expertise in Augmented Reality technology**.

Suretek's Solution

At **Suretek Infosoft**, we deployed a team of **AR testing specialists** with experience in **immersive technology QA, mobile automation, and Unity-based testing**. Our goal was to **simulate real-world conditions remotely** and validate both **functional and non-functional aspects** of the app to ensure readiness for public release.

We leveraged the latest tools and methodologies for **cross-platform AR testing**, incorporating **AI-powered test automation, computer vision-based recognition testing**, and **remote device**

cloud testing to streamline the process.

Testing Scope and Scenarios

Real-Time Object Tracking Validation

Tested how accurately the app detects and aligns 3D objects over AR markers across various phone models and screen resolutions.

Multi-Device Compatibility

Assessed app behavior on high-end vs. low-end Android and iOS devices—focusing on **camera quality, CPU load, and memory consumption**.

Environmental Simulation Testing

Verified app performance under different **lighting, angles, obstructions, ambient noise**, and user motion using AR testing labs and simulated environments.

Interactive UI Element Testing

Ensured all interactive 3D elements (like clickable buttons on models) correctly redirected to external links or information layers.

2D/3D Object Recognition Testing

Validated object mapping precision to ensure AR content was correctly rendered based on visual markers.

Accessibility Testing

Assessed UI/UX for inclusivity across age groups and physical abilities, ensuring AR navigation was smooth and intuitive.

Security & Data Handling

Ensured **no sensitive user data was compromised** while interacting with external content or when permissions (like camera/mic) were accessed.

Impact Delivered

- Identified and resolved UI inconsistencies through **GUI testing**
- Detected logic flaws and system crashes via **functional and exploratory testing**
- Ensured **data protection** through rigorous **security assessments**
- Simulated **real-world scenarios** remotely using device farms and automation
- Enhanced **app responsiveness and stability** across the UK's popular mobile devices

Technologies Used

- AR Testing Frameworks**:** Unity AR Foundation, Apple ARKit, Google ARCore
- Automation Tools**:** Appium, Selenium, BrowserStack Live, TestProject
- Performance Tools**:** Firebase Performance Monitoring, Charles Proxy, JMeter
- Bug Reporting & Tracking**:** Jira, TestRail, Allure Reports
- Device Farms**:** AWS Device Farm, LambdaTest for remote cross-device testing
- Accessibility Tools**:** AXE DevTools, TalkBack, VoiceOver

Why It Matters

The UK is emerging as a global hub for **immersive digital technology**. Whether you're in education, construction, or gaming, your AR application must work seamlessly in **diverse environments** and across **varied user expectations**.

Suretek ensures your product is **battle-tested, user-ready, and globally competitive**, using **cutting-edge QA tools and methodologies** that align with the standards of the UK's **digital innovation economy**.

Conclusion

Suretek Infosoft successfully validated the client's AR mobile application across diverse devices, environments, and user conditions using a rigorous, real-world QA approach. By focusing on cross-platform performance, usability, and accessibility, we ensured the app delivered a stable, immersive, and high-performing experience ready for the UK's competitive tech landscape. Our end-to-end testing uncovered critical issues and enabled the client to launch a refined, user-ready product with confidence.

Looking to ensure your AR or immersive app delivers flawless performance across devices? **Connect with our QA experts today** to build user-ready, bug-free, and industry-compliant digital experiences.