Malcolm Johnson

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GitHub: https://github.com/MXHJohn314

Work Experience

- **Galacticware Enterprises LLC, Mobile Application Engineer (July 2025 - present)**
- Created the most capable gesture detector to date known to any Android Input Method Extension (IME), capable of detecting 38 different gestures in total.
- Synthesized a developer API capable of expressing an entire IME design including size, shape, color, default language support, key placement, and key functionality.
- **Amazon Robotics, Software Dev Engineer 1 (June 2022 - May 2024)**
- Redesigned a communication layer between the application under test and the automation to accommodate technical limitations of our app at scale, resulting in the relaunching of Android automated tests after three years of inactivity.
- Implemented an on-demand, Wi-Fi capable test automation framework (Java, Kotlin TestNG, Appium, Gradle), capable of running 144 TestNG-based tests daily, saving hundreds of manual hours per week.
- Trained and supervised a Co-Op to contribute to the in-house database structure (SQL, XML, Kotlin), enabling the system to make four new REST calls for changing the device shadow state.
- Created an in-house server (Python [Flask], AWS), resulting in an API for controlling a fleet of in-house Android devices.
- Wrote a collection of scripts (Bash) for the automation of running TestNG suites from a cloud computer, resulting in an average of 4 hours/week saved by reducing down-time between test runs.
- Developed an in-house image recognition package (Kotlin), allowing for high-fidelity testing on proprietary UI objects and shapes during automated physical device tests.
- Consistently responded to on-call duties, preventing 8 high-severity issues from occurring or escalating up the chain of command over the course of a year.
- **Arrow Electronics, Big Data Engineer II (January 2022 - June 2022)**
- Worked in automation (Java, Selenium) to construct data, reducing the time complexity of element search to linear from $O(n^2)$.
- Created and maintained scripts for automated data movement between machines in a Hadoop cluster, preventing data loss of over 100,000 items on the primary node.
- Developed onboarding and SOP documents to expedite the ramp-up for new data engineers, reducing computer setup time to less than one day of work.
- **MSU Denver, STEM Learning Assistant (June 2020 - December 2021)**
- Collaborated with professors to ensure student success in Computer Science courses.
- Over 95% of students reported that the assistance was beneficial to their performance in the class.

Education

- Bachelor of Science in Computer Science, May 2022.
- Minor in Mathematics, May 2022.

Relevant Projects (June 2022 - May 2024)

- Android Native Gesture Detection Service (Android, Kotlin, Rust) - A standalone application to allow unconventional (circular and drag&return) gestures with high performance.
- Griddle touch keyboard - A remake of the popular alternative, MessagEase on-screen keyboard, for Android power users (Coming to Google Play Store soon).
- Keyboard user recognition (Python) - Engineered data for a detection system based on user keyboard input.

Other Titles and Accomplishments

- MSU Denver Association of Computing Machinery Chapter Vice President.
- MSU Denver Advisory Council of the Computer Science Department President.

Programming Languages:

Bash, Python, Java, Kotlin, C#, SQL, Rust, Scala.

Frameworks:

Android, AWS, Gradle, MongoDB, MQTT, TestNG (test automation), Selenium, Appium, Jetpack Compose.