

Tom Davison

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SUMMARY

- Experienced .NET Developer with 4 years of success in developing and testing software for embedded devices utilising .NET core, MVC design pattern, C, C#, Bash, and API development. Proficient in Linux-based operating systems, Jenkins CI/CD pipeline, and firmware development. Adept at using the MEAN stack and Gatsby for personal projects. A highly detail-oriented and self-driven individual with strong critical thinking skills. Proven ability to work independently and deliver high-quality results that meet project requirements and industry standards.

TECHNICAL SKILLS

- Net Core, MVC Design Pattern, C, C#
- Bash, API Development, Linux, Jenkins
- MongoDB, ExpressJS, AngularJS, Node.js, Gatsby

EXPERIENCE

Software Development Engineer – Axxin

Duties and Accomplishments

- Development of C# software and firmware written in C to fulfil international customer requirements and meet ISO and FDA standards.
- Implementation of desktop applications that communicate asynchronously with networked medical devices.
- Debugging and troubleshooting multiple branches of a full-stack system that has been in production for over 10 years.

Automation API

- Design and implementation of a device API for customer modification, execution, and retrieval of system data for R&D purposes.
- Modification of firmware in C to allow for finer control over hardware events through the Automation API.
- Expansion of software to allow users to create and record macros using GUI events and export macros to Bash.
- Creation of a scripting language and interpreter for sequential execution of API commands.

Project Lead – Project Magneto

- Collaboration with customers to elicit requirements and deliver a product that meets expectations.
- Contribution to the development and addition of a multi-page workflow that identifies new test accessories.

Software Quality Assurance Engineer – Axxin

Duties and Accomplishments

- Design and programming of medical device scripts and macros used by the quality assurance team to reduce time commitment and margin of error.
- Troubleshooting and analysing software in Bash, C#, and C code, iterating through changes and identifying inconsistencies.
- Creation of macros in Bash to automate test running and expose software defects.
- Created a tool when the team transitioned between test management systems which greatly increased the speed at which test protocols could be imported. Allowed the team to work on more crucial deadlines

Automation API

- Creation of macro and script templates for co-workers from other disciplines to create responsive macros without deep programming knowledge.
- Designed and created macros and scripts which dynamically responded and reacted to device level events
- Created macro and script templates which allowed co-workers from other disciplines to create responsive macros without having a deep understanding of programming

Device Mirror Software

- Independently created software using C# and windows forms which utilized the automation API to control medical devices remotely
- Expanded upon the creation of this project to allow users to create and record macros using GUI events
- Further expanded the software to support the exporting of created macros to Bash

WORK EXPERIENCE

Receptionist | Royal Yacht Club of Victoria

November 2012 to 2018

Involved managing payments and clerical work during times where no other employees were working

Software Developer | Final Year Project: Opaque Media

March 2017 to November 2017

As the Deputy Lead, I was part of a research project focused on creating a generalized end-to-end tool using a convolutional neural network for real-time analysis of hand poses with a generic depth camera. My role involved developing additional tools, such as a finite-state-machine to recognize complex patterns and a benchmarking suite, to enhance the functionality of the tool.

Software Quality Test Engineer | Axxin

November 2018 to March 2020

As a software Quality Assurance Engineer, I was responsible for creating and executing software test cases, protocols, and validation reports that met internal, ISO, and FDA standards. I was involved in identifying software defects and documented the process from detection to resolution throughout all testing phases.

Software Development Engineer | Axxin

March 2020 to April 2022

Developed a full-stack embedded biomedical device, with software written in C# .NET and firmware written in C, that has been in successful production for over 10 years. Implemented a device API and gained expertise in using the Jenkins CI/CD pipeline. Created comprehensive documentation that met internal, ISO, and FDA standards.

EDUCATION

Bachelor of Computer Science, Swinburne University of Technology, 2018

REFERENCES

Available on Request