Jamie Spyker

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Objective

Experienced mechatronics engineer with a versatile skillset looking for exciting career opportunities with a focus on software development. Currently have interest in robotics, vision, machine learning and web development.

Experience

Onfarm Solutions *(Full Time)* *Jun 2020 – Present*

Small, growing company focused on dairy farm automation. Brought on as the sole software developer for the company.

- Organized and maintained software across all company products. Refactored codebases improving structure & readability. Solved outstanding product bugs & issues. Implemented revision control practices.
- Architected and implemented complex PLC programs utilizing modern programming techniques. Designed and built user-friendly HMI layouts. Delivered multiple programs for the business that are now in commercial use.
- Developed bespoke real-time sensor algorithms. This included sensor selection, on-site data collection, algorithm design, functional testing and final system programming. These were successfully implemented into new products.
- Involved with integrating IIoT support for our products. Supported back-end development utilizing the Azure IoT platform. Successfully integrated into future products while also producing retrofittable kits for existing hardware.
- Designed and built custom software applications for the business, simplifying tasks and automating processes.

Mimeo Industrial Ltd - *Contractor (Part Time)* *April 2021 – July 2021*

Start-up automation company. Supported initial development of a new project.

- Assisted in a remote-control 6-axis robot project. Developed basic machine vision, robot communications and user interface. Resulted in a successful prototype system that could be demoed allowing for additional funding to be secured.

Scott Technology *(Full Time)* *Oct 2017 – Jun 2020*

Global automation and robotics company. Worked in small R&D team on a variety of projects.

- Involved in R&D projects from initial conception to final design. Contributed to the development of complex prototype systems involving robot programming, vision algorithms, 6-axis robots, PLCs, user interfaces and device communications.
- Developed business cases including market analysis, scheduling and budgeting. Wrote ongoing project reports, translating outcomes to stakeholders. Had proposals accepted by external customers to provide R&D for their business.

Notable Projects

Teatwand Parallel & Stepover *Onfarm Solutions*

Tasked with developing the software for two new products. Completed on-site research at local NZ farms, figuring out how to best approach the problems. Developed complex algorithms for reliably detecting cows in difficult environments. Architected, designed and built custom software to drive the hardware. Worked onsite to commission and improve system performance. “Stepover” is in production and is driving significant new revenue for the business. The “Parallel” has a first install complete, and is expected to fully commercialized in the near future.

Automated Poultry Trussing *Scott Technology*

Worked in a small development team to create a poultry trussing system from scratch. Solely responsible for the software/electrical research, design and implementation. Produced a prototype system on-schedule and under budget. Commissioned system overseas and assisted in customer showcase, landing initial product sales. This product has since been commercialized and is generating significant interest in the industry.

Skills

Languages: IEC 61131 (Ladder Logic / Structured Text), Python, C/C#, WPF, VBA, Bash
Software: CODESYS**,** Visual Studio, VSCode, MATLAB/Octave
Hardware: Embedded microcontrollers, Custom Linux-based PCs, KUKA Robots, AB/Siemens/Omron/Horner PLCs
Other Tools: Microsoft Azure, openCV, Git Revision Control, SQL, Word/Excel

Education

University of Canterbury

Master of Engineering, Mechatronics Thesis *2016 – 2017*
Bachelor of Engineering, First Class Honors *2012 – 2015*