

# Joshua Jordan

BEng (hons) Mechatronics/Software Engineer



*I make solutions using software, creativity and machine learning. I'm passionate about working with great people to solve challenging problems that make a difference.*

## Experience

- Excellent development ability in C++, Python and C
- Proven track record of independently completing cutting-edge technology projects
- Responsible for system design of machine learning products
- Extensive experience with subversion, debugging tools and best practices
- Experience in designing real-time systems and optimization for embedded devices
- Interacted with clients and investors to scope computer vision products
- Excellent written and verbal communication skills
- Thrive within a creative team environment
- Constantly looking to learn and improve

## Employment

- 2017–2019 **IMAGR - Mechatronics Engineer** [www.imagr.co/](http://www.imagr.co/)  
Key member in designing a world-class computer vision solution for retail. Saw our product go from early prototype to winning a contract with an international company and customer roll out. Real time detection and classification of >10,000 unique products.
- Rapid prototyping computer vision solutions
  - Designed an electro-mechanical autonomous data collection platform
  - Real-time deep learning classification and segmentation
  - "Big data" pipelines using zmq
  - Deep dive into camera systems
  - Helped set up the software team - hiring, testing and best practices
  - Liaison with investors, contractors and customers
- 2013–2017 **Seequent (formaly AranzGeo) - Software Engineer** [www.seequent.com/](http://www.seequent.com/)  
Geological modelling startup producing best in class software in conjunction with a diverse team. Responsible for critical features in the product.
- Implementation of complex mathematical code within a python/c codebase for windows
  - Fast, responsive and intuitive application with large datasets
  - Bug tracking, licensing and automated tests for desktop application
- 2012–2013 **Trimble Navigation - Software Engineer** [www.trimble.com/survey/](http://www.trimble.com/survey/)  
Developed innovative surveying products in a mature codebase to produce a wide range of geospatial data.
- Research and prototyping of real time HUD devices as an independent initiative
  - GPS and UX work in C and C++ for Windows CE devices
  - Developed an external API for third parties
- 2011-2012 **HITLab NZ - Researcher** [www.hitlabnz.org/](http://www.hitlabnz.org/)  
UX Research scholarship using a haptic device for molecular bonding problems.
- OpenGL and OpenCV development

## Contact

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## Languages

C++, Python, C, C#,  
Java, Lisp

## Tools

OpenCV, Docker, Git,  
ZMQ, Darknet,  
Tensorflow, openVino,  
Numpy, matplotlib

## Platforms

Linux, Windows, Nvidia  
Tx2, Raspberry Pi, Keil

## Education

2007–2011    **Bachelor of Engineering (Hons), Mechatronics**    University of Canterbury, Christchurch  
2:1 Distinction  
Class representative - events organisation, liaison for peers

### *Awards*

2011    **ENZCon published paper**    Massey University, Palmerston North  
Parallelism of an MCU on an FPGA

2007    **McKee Trust Scholarship**    University of Canterbury, Christchurch  
Three year high achievement scholarship

## Volunteering

2017–    **Event manager and artist**    Hijinx  
Part of a community group running stages at various festivals in NZ. This involves Dj-ing, lighting setup and building artwork to engage and delight.

2015–    **Start-up consultant**    EasyLink  
Technical consultant for feasibility of automated wheelchair system. Wrote all the software, including computer vision and controls, to get prototype ready for investor pitches.

## Interests

### *Professional*

Artificial intelligence, embodied cognition, topology, computer vision, systems design, clean tech.

### *Personal*

Surfing, DJ'ing, kite-surfing, football, sailing, guitar, skiing, acting.

*Written references available on request.*