Andrew Creegan

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Summary

I am an engineer holding a master's degree in Bioengineering from the University of Auckland. Over the last several years I have worked in a broad range of engineering disciplines including mechanical, electrical, and software design, and data science. I enjoy working at the crossroads between these disciplines, and I believe cross disciplinary knowledge is very helpful in realizing functional goals in product development.

I also enjoy working in a research environment, which is why I decided to move back to the Bioengineering Institute after several years of working in industry. I am now looking for continued employment or PhD opportunities.

Experience

2020-Present **Auckland Bioengineering Institute**
Research Assistant – Bioinstrumentation Lab
- Worked on an Electrical Impedance Tomography (EIT) project with funding from the New Zealand COVID-19 Innovation Acceleration Fund
- Helped develop a prototype EIT belt for scanning patient's lungs
- Contributed to EIT reconstruction and visualization software

2019-2020 **Aeroqual Ltd**
Project Engineer (April 2019-Present)
- Interpreted standards to develop data analysis software
- Wrote software in python to calculate sensor characteristics from test data
- Designed automated test equipment for testing sensors

2015-2018 **StretchSense Ltd**
Production Manager (2017-2018)
- Used data to plan and predict production capacity
- Established production lines for custom products at headquarters facility
  - One line went on to win StretchSense's first mass production contract.
- Sat on Health and Safety Committee, responsible for setting company health and safety policy, and reporting to the board on health and safety matters

Quality Control Engineer (2016-2017)
- Designed mathematical analysis software for calculating sensor characteristics from test data. Wrote software in MATLAB/Octave
- Designed instrumentation to collect sensor data

- Results of data analysis were used to create StretchSense's technical datasheets

Project Engineer (2015 – 2016)

- Brought key technological expertise from research at the University of Auckland to StretchSense
- Managed two projects commercializing new technology

2014-2015 **Uniservices Ltd**
Engineer
- Worked with Dielectric Elastomers, a technology that uses capacitance to infer the shape of a silicone sensor.
- Designed and tested electronics for a project aimed at commercializing dielectric elastomer technology.

Other Projects

2020 **Covid19-Cases.nz**
- A website for visualizing covid19 cases
- Developed to experiment with data visualization using the dash framework for python

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Other Interests

- Dancing
- Sewing
- Woodworking
- Metalworking

Education

2009-2014 **University of Auckland**

Master of Engineering (Honours – First Class) in Bioengineering

Bachelor of Engineering (Honours) in Mechatronics

References Available on Request