Maddy Clements

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Experienced engineer specialised in mathematical modelling with a strong track record of problem solving, programming skills, data collection and visualisation and project management. Innovative, resourceful and results-driven looking for a data science role to continue developing my skills.

Education

University of Auckland

Master of Engineering in Engineering Science (First Class Honours)

Awarded 2018

Title: Compressive Failure of Hybrid Composite Laminates, supervised by Dr. Mark Battley

Industry Scholarship from Southern Spars Ltd.

Bachelors of Engineering (Hons.) in Engineering Science (First Class Honours)

Awarded 2017

Skills

Python

MATLAB

FEA/CFD analysis

C#/OOP

HTML/CSS

Basic CAD

Visual Studio Code

Simple App development

Git

MS Office suite, Excel

Experience

Product Development Engineer,
Fisher and Paykel Healthcare

September 2021 - May 2023

Worked on algorithm development for home and hospital healthcare devices, processing data with Python and MATLAB to assist with embedded control development

Created and maintained automated data visualization workbooks on a variety of large scale device data and clinical trials to provide engineering insights for product development teams.

Led a healthcare accessory project coordinating multiple stakeholders. Designed control algorithms for a new therapy mode in a regulated medical device. Conducted tests to assess product efficacy.

Developed an internal application in MATLAB to store, sort and retrieve data collected for engineering purposes, centralizing and simplifying access to data across an entire product group.

Product Development Engineer,
Fisher and Paykel Appliances

February 2018 - September 2021

Worked in a number of business units creating computer-aided models, focusing on FEA and CFD. These models informed design choices, reducing reliance on physical testing and speeding up design iterations

Created MATLAB Simscape models for refrigeration and oven systems to accelerate control system algorithm development.

Processed and presented test data for both technical and non-technical audiences.

Oversaw part transition to a new vendor, conducting quality assessments with Minitab and Six Sigma analysis. Coordinated offshore trial builds, saving 200k NZD annually while maintaining part and subassembly quality and performance.