

REUBEN MARLAND

GRADUATE MECHANICAL ENGINEER

INFO

MOBILE

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reuben-marland

WORK EXPERIENCE

BARTENDER 2019 -
2020

The Mason Arms - Oxford

FARMER 2020 - 2021

Rectory Farm - Oxford

CHEF 2021 - present

Bambalan - Bristol

The Downs Cafe - Bristol

The Metropolitan - Bristol

ACHIEVEMENTS

36th in UK out of 80,000
in Bebras computational
thinking national competition
2016

Student mathematics
ambassador - selected from
350 peers

SKILLS

Fusion360	Inventor
MATLAB	Arduino
Python	Nastran
EagleCAD	Javascript
HTML	Flow3D
Indesign	CSS
Illustrator	Photoshop

PERSONAL SUMMARY

Passionate for innovative engineering solutions, with extensive CAD experience, demonstrated research skills, adaptive history to creative end-to-end engineering tasks and adept to large/complex learning curves, I have dedicated myself to numerous projects, taking on diverse roles that showcase my strong work ethic, versatility, and sociability.

Alongside my additional self-taught knowledge in programming languages, I am in a position to lead initiatives in open end mechanical engineering problems, spanning 3D modelling, software, virtual modelling and project management.

RECENT PROJECT EXPERIENCE

- **Innovation of a digital twin to aid crop growth in commercial farming**
University of Bristol / 4th year group industrial project
 - Leading electronics design for the sensor segment of the digital twin utilising Arduino IDE
 - Leading the implementation of IoT within the device
 - Leading the design of device and deployment mechanism, physically and within Fusion360
 - Leading the design in EagleCAD and fabrication of the PCB
- **Design of a 2 degree-of-freedom robotic arm**
University of Bristol / 4th year group project
 - Lead design process for conceptualisation and build of the robot, primarily in Fusion360
 - Wrote a large portion of the Arduino IDE code and set up the robots coordinate interface
 - Assessed, analysed and implemented various control options
- **Design and optimisation of the manufacturing system of a door damper**
University of Bristol / 4th year group project
 - Acted as a consultant to the design of the door damper, optimising physical features
 - Created bespoke maintenance regime by using MATLAB + Python combined with AI to create models whilst incorporating large assumptions-based research into calculations
 - Optimised the minimum order quantity of materials required by assessing multiple factors via a comparison matrix and algorithm within MATLAB
 - Large learning curve in Flow3D to model CPD of casting of the door damper
- **Bespoke design of a digital twin to aid crop growth in commercial farming**
University of Bristol / 3rd year solo project
 - Extreme learning curve into electrical engineering
 - Chose components via building an automatic CSV analyser in MATLAB that could compare up to 4 different aspects of a component
 - Designed and visualised the end product in Fusion360
 - Constructed the PCB within EagleCAD

EDUCATION

- **MEng Mechanical Engineering**
University of Bristol / 2020 - present

Tailored towards innovation, product design and conceptualisation, virtual solutions, electronics, control and manufacturing.

Predicted degree mark: 67%
- **A-Levels**
d'Overbroecks / 2017-2019

Mathematics - A*

Further Mathematics - A*

Physics - A*