FLORIAN MEALING

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PROFILE

Engineering student specialising in embedded systems, robotics, and full-stack product development. Designed and built multiple real-world hardware and software systems including IoT devices, autonomous robots, and production web platforms. Seeking an engineering role within a university spinout focused on real product development.

KEY PROJECTS

SYNCMOVE - Founder & Full-Stack Engineer

- Architect and built a production full-stack web and mobile platform
- Developed backend using Node.js and TypeScript
- Built frontend using React and React Native
- Designed database and system architecture
- GitHub: fmealing/SyncMove-App-2

Technologies: TypeScript, React, Node.js

FINAL YEAR PROJECT
Embedded IoT Wearable Glove for Gym Tracking

- Designed embedded system using ESP32 to track repetitions and load in real time
- Integrated flex sensors and IMU for motion capture
- Implemented MQTT communication to cloud database
- Designed and soldered hardware prototype
- GitHub: fmealing/Final-Year-Project

Technologies: ESP32, Embedded C++, MQTT, Sensors

AUTONOMOUS ROBOT WAITER - Software Lead

- Developed navigation and control software for autonomous service robot
- Integrated sensors and control logic for real-time movement
- Worked in multidisciplinary team to deliver full robotic system
- GitHub: fmealing/ADP-2025-Botler

Technologies: Robotics, Embedded Systems, Control

WILDLIFE PARK AUTOMATED WEIGHING SYSTEM

- Designed embedded weighing system using load cell and an ESP32
- Developed firmware to transmit data to Supabase database
- GitHub: fmealing/bwp-idp3

Technologies: ESP32, Embedded C++, Sensors, Databases

COMPUTER VISION HAND GESTURE SYSTEM

- Developed gesture recognition system using MediaPipe
- Implemented real-time computer vision processing
- Achieved real-time gesture recognition using webcam input
- GitHub: fmealing/Smart-Vision

Technologies: Python, MediaPipe, Computer Vision

TECHNICAL SKILLS

Embedded Systems

- ESP32
- Arduino
- Sensors
- Microcontrollers

Programming

- C/C++
- Python
- JavaScript
- TypeScript

Software Development

- Node.js
- React
- Rest APIs
- React Native

Engineering Tools

- MATLAB
- Fusion360
- Simulink
- VHDL

EXPERIENCE

Founder • Full-Stack Engineer
2024 - Present

- Architect and built production full-stack web and mobile platform
- Developed backend using Node.js and TypeScript
- Built frontend using React and React Native
- Designed database and system architecture

EDUCATION

Master of Engineering - University of Birmingham
2022 - 2026
Current grade: 74.76% (First Class)

Key modules:

- Electronic Engineering - 82%
- Internet of Things - 80%
- Engineering Mathematics 2 - 87%
- Telerobotics and Augmented Reality - 74%
- Embedded Systems - 77%
- Final Year Project - Ongoing