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🌐 Mikhail Gorbunov

SKILLS

Programming

Python
JavaScript
Java
MATLAB & Simulink
CSS & HTML
C & C++
Verilog

Software & Tools

Libraries

(e.g. React, Expo, Gatsby, Node.js, Flask)

Visualisation

(e.g. Tailwind, Nativewind, Tree.js)

Data handling

(e.g. MongoDB, SQL, PostgreSQL)

Cloud platforms

(e.g. Firebase)

Docker

GitHub

SolidWorks, Blender

Altium Designer, KiCad

CERTIFICATIONS

1. Raspberry Pi Full Stack
2. Mastering Microcontroller and Embedded Driver Development
3. Beginning C++ Programming - From Beginner to Beyond

INTEREST & HOBBIES

Robotics

(e.g. RC car, robotic arm)

Electronics

(e.g. battery management systems, chargers)

Mikhail Gorbunov

PROFILE

Motivated and inspired software engineer with a background in Mechanical and Electrical Engineering with a proven ability to collaborate and contribute to teams varying in size. I am passionate about the design and development of embedded systems. I am eager to contribute to a team that solves complex problems and to learn and grow as a problem-solver and programmer.

EDUCATION

📅 Oct 2022 - Feb 2023

📍 CodeClan,
Edinburgh

Professional Development
Award

First Project: Commercial website 🌐

- The app allows users to choose only available hours and book the table for the next two hours.
- Designed a fully functional prototype of a restaurant booking website using Python and PostgreSQL.

Second Project: Learn_Scotland 🌐

- As a team, built an educational platform for running educational quizzes accessible via API.
- Developed a RESTful API to control question data using Express.js with MongoDB.
- Created a multiple-choice questions module in React that randomly displays questions and updates users' scores.

Third Project: Shakelt 🌐

- As a team, built a mobile responsive application using Expo that integrated with API data to allow users to create accounts, search recipes and add ingredients to a personal basket.
- Designed a real-time access database and authentication system using Firebase and AsyncStorage.
- Created an easy-to-understand and use front end for account management and basket modules.

📅 Sep 2017 - Jun 2022

📍 University of Edinburgh,
Edinburgh

BSc Electrical and
Mechanical Engineering

- Modules covered – Digital System Design, Digital System Design 2, Power Systems, Power Electronics and Machines, Control and Instrumentation Engineering, Interdisciplinary group project.

Projects

- As a team, we developed a wind turbine with a pitch control speed regulator, where I was in charge of constructing an Axial flux permanent magnet generator and rectifier.
- Programmed control logic in Matlab for a physical drone to follow a line, land, and grab an egg.
- Designed a high-voltage battery case by making FEA and CFD analysis.
- Introduced a simulation made in Maltab for high voltage set-up, providing suitable values for precharge and discharge circuitry.
- Designed a PCB for precharge and discharge circuitry using Altium Designer.
- Constructed a back-to-back test rig for high-power motors.
- Set up and configured CAN bus interface between charger, battery management system and inverter.

PROFESSIONAL EXPERIENCE

📅 Jun 2022 - Oct 2022

📍 Stewart Technology LTD,
Galashiels

Junior Electrical Engineer

- Searched for alternative components to decrease misplacing made by a pick and place machine.
- Examined manufactured PCBs and resoldered faulty or misplaced components.
- Inspected faulty electric boards using a signal generator and oscilloscope, verified faults, and alerted the lead engineer.

📅 Jun 2021 - Sep 2021

📍 Stewart Technology LTD,
Galashiels

Summer Internship

- Operated at all of the stages of an assembly line for fabricating PCBs.
- Serviced a pick-and-place machine.
- Programmed positioning of alternative surface mount components for the pick-and-place machine.