

Oliver Rosol

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EDUCATION

BEng Electronic Engineering | King's College London

09/2021 - 06/2024

Achieved Upper Second Class Honours.

- Relevant Modules: Mechatronics (70%) | Energy Generation and Storage (86%) | Cryptography (71%) | Electronic Circuits (72%) | Logic Circuit Design (72%).
- Final-year project: "Investigating the Performance of an Ion Propulsion System in a Formula One Chassis" - designed and constructed with supervision from Dr Francesco Ciriello, attaining a score of **80.4%** (First-Class).

PROFESSIONAL EXPERIENCE

Job Shadowing | Mace Group

03/2018 - 05/2018

- Witnessed how the team utilized BIM and CAD software along with other digital tools to facilitate collaboration and design integration.
- Gained insights into the process of obtaining stakeholder approvals and addressing feedback from clients or project managers.
- Attended interdisciplinary design meetings where architects, engineers, and other stakeholders discussed project requirements, design challenges, and potential solutions.

Deputy Manager | Pizza Express

06/2021 - 07/2024

- Managed day-to-day restaurant operations, ensuring exceptional customer service and an efficient workflow in a high-pressure, fast-paced environment.
- Analysed sales data and customer feedback to identify areas for improvement and incorporate changes accordingly.
- Implemented operational strategies to streamline processes, reduce waste, and enhance productivity.

M&E Engineering Intern | Transport for London (TfL)

05/2024 - 08/2024

- Contributed to the enhancement of an automated track monitoring system, enhancing rail safety and efficiency.
- Assisted in designing and implementing electronic sensors and data collection devices for real-time track condition assessment.
- Collaborated with cross-functional teams to integrate hardware components with software systems for comprehensive track analysis.
- Gained hands-on experience in signal processing, data interpretation, and predictive maintenance techniques in a transportation infrastructure setting.

PROJECTS

Self-Balancing Bicycle | Mechatronics

09/2022 - 01/2023

- Developed PID and state-space control techniques using an Arduino microcontroller for balancing and locomotion.
- Optimized control parameters via Simulink simulations and physical tests, achieving a 97% stability rate.
- Collaborated in a team to prepare technical reports, video demonstrations, and live presentations showcasing the successful design.

Formula Student | KCL Team 2023/24

10/2023 - 05/2024

- Spearheaded a team of 6 mechanical engineers in the design, simulation, and fabrication of a high-performance electric powertrain system.
- Conducted research on materials and manufacturing techniques to optimize powertrain performance, efficiency, and reliability.
- Designed control algorithms for the electric motor and battery management system using MATLAB/Simulink, achieving a simulated 0-100 km/h time of 2.8 seconds.
- Managed project timelines, task delegation, and progress tracking to ensure adherence to competition deadlines and requirements.

ALU Design | Hardware Design

01/2024 - 05/2024

- Designed a 6-bit Arithmetic Logic Unit capable of performing various operations on two 6-bit inputs using VHDL.
- Verified the functionality of the ALU design through extensive testing and demonstrated the operation of all supported operations by feeding appropriate inputs on the FPGA kit.
- Optimized the ALU design by strategically leveraging don't-care conditions, adhering to the constraint of not using behavioural statements or library functions for addition and subtraction operations.

SKILLS

Python | C | C++ | MATLAB | Simulink | VHDL | Vivado | Fusion 360 | Solidworks | Revit | AutoCAD | Abaqus CAE | Star-CCM+ | Ansys

LANGUAGES

English (Fluent) | Polish (Native) | Czech (Full professional proficiency) | Spanish (Limited proficiency)

EXTRACURRICULAR ACTIVITIES

Vice-President - KCL Calisthenics Society 2023/24.

Treasurer - KCL Polish Society 2022/23.

Captain - LKS Różnowo football team 2018/19.

Lead - Formula Student powertrain component team 2023/24.

BEng Academic Representative - NMES Student Ambassador at KCL 2021/22.

(References from any work experience are provided upon request).