RICKY MUTSVAIRO

Electrical Engineering Graduate (MSc Candidate)

@ rickymutsvairo9@sjtu.edu.cn +86 186 1637 3805 Shanghai, China
English, Chinese in ricky mutsvairo June 29, 1998

EXPERIENCE

Project Management Intern — Part Time – 2 months

Greatway Company (Shanghai Guangwei Electrical Group)

June 2021 – July 2021 — Shanghai, China

- Collaborated within a project team to meet deadlines, demonstrating strong teamwork and time management skills.
- Performed project modelling and simulations using **MATLAB** to support technical analysis and decision-making.
- Analysed project plans for technical effectiveness and maintainability, contributing to viability assessments.

Huawei Harmony OS Innovation Bootcamp — Part Time – 1 month

Huawei Training Program

July 2021 — Beijing, China

- Utilised **Python** to program and explore Huawei's HarmonyOS in a fast-paced, collaborative environment.
- Developed and delivered project presentations, demonstrating effective communication of technical concepts to diverse audiences.

EDUCATION

Master of Science in Electrical Engineering — Expected Dec 2025

Shanghai Jiao Tong University

September 2022 – Present — Shanghai, China

Bachelor of Science in Electrical Engineering — June 2022

Shanghai Jiao Tong University

September 2018 – June 2022 — Shanghai, China

Chinese Language Program — June 2018

Tongji University

August 2017 – June 2018 — Shanghai, China

PROJECTS

EV Battery Charger Design — Master's Thesis

Shanghai Jiao Tong University — 2022 – Present

Design and implementation of a novel EV battery charger with a wide output voltage range.

EV Battery Charger Prototype — Graduate Project

Shanghai Jiao Tong University — 2022 – 2023

Prototyping and testing of an EV battery charger.

Fault Line Detection System — Undergraduate Thesis

Shanghai Jiao Tong University — 2021 – 2022

Design of a fault line detection system in inverter power switches.

SKILLS

Accustomed to working in a team, motivated and detailed in projects.

Programming languages:

C | C++ | Python | MATLAB

PCB Design:

Altium Designer | Proteus

Simulation Tools:

MATLAB/Simulink | PLECS | Pspice | LabVIEW

Micro Controllers:

Arduino | F28335

KEY SKILLS

Project Management | EV Technologies | Circuit Design | System Design | PCB Design | Microcontrollers | Simulation | Data Analysis

AWARDS

Chinese Government Scholarship
Sept 2018 — SJTU

Outstanding Performance Award
June 2018 — Tongji University

Chinese Government Scholarship
Sept 2017 — Tongji University

Best student Award (A-Level)
Nov 2016 — Mufakose High School

PUBLICATIONS

Research Paper
2024

'Design of an Integrated EV On-Board Charger with a Wide Output Voltage Range', published in the 13th International Conference on Power Electronics, Machines and Drives (PEMD 2024). DOI: 10.1049/icp.2024.2198, Publisher: IET, Conference Location: Nottingham, UK.

Research Paper
2024

'Design of a Standalone EV Charger with Enhanced Control and a Wide Output Voltage Range,' published in the 2024 IEEE International Conference on Electrical Energy Conversion Systems and Control (IEECSC), Shanghai, China. DOI: 10.1109/IEECSC62814.2024.10913670

ADDITIONAL INFORMATION

Research Interests
Electric Vehicle Technologies, Power Electronics, Battery Management Systems, Fault detection in power converters, System Design and Data Analysis

Professional Memberships
Student Member, IEEE Power Electronics Society

International Experience
Studied and interned in China since 2017, gaining cross-cultural communication skills and adaptability

OTHERS

Maths and Physics Tutor
Closely adhered to lesson plans and kept students motivated, engaged and focused

Athlete
Regularly play basketball, tennis and table tennis

PERSONAL STATEMENT

I am an analytical and detail-oriented MSc Electrical Engineering candidate specialising in Power Electronics and Electric Vehicle (EV) technologies. I possess a strong foundation in technical analysis, system design, and proposing innovative solutions, evidenced by several published research papers in IEEE. I can work effectively in cross-cultural teams and seek to apply knowledge of engineering safety, reliability, and maintainability to an engineering company. I'm eager to contribute my technical expertise and innovative problem-solving abilities to a growing engineering company. My objective is to advance my career and significantly contribute to the advancement of rapidly growing technologies.