

NIEL RANDOLF ISRAEL

Product Designer | Electronics Engineer | Prototype Developer

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PROFESSIONAL SUMMARY

Results-driven Electronics Engineer and Product Designer with 4+ years of hands-on experience translating concepts into working prototypes and production-ready systems. Proven track record in designing battery packs and energy systems for electric vehicle conversions, developing embedded electronics, and delivering end-to-end prototype solutions for clients across R&D sectors. Adept at bridging engineering precision with creative problem-solving from initial sketches to final fabricated products. Seeking to leverage a strong foundation in electronics, 3D design, and systems development to contribute as a Product Designer in an innovative, technology-driven organization.

WORK EXPERIENCE

Project Engineer | Smart Sustainable Community Project (SSCP)

May 2026 – Present

- Design and develop battery pack systems for SSCP E-trikes, supporting sustainable community electrification initiatives.
- Collaborate with cross-functional teams to ensure battery systems meet performance, safety, and cost requirements.
- Apply engineering best practices in system integration, testing, and documentation for EV energy solutions.

Science Research Specialist | Research & Development — Fastrac Lite Project

November 2024 – April 2026

- Designed and developed a complete battery pack and battery management system (BMS) for an electric conversion kit transforming conventional tricycles into E-trikes.
- Ensured all designs and systems comply with Philippine National Standards (PNS) for electric vehicles.
- Conducted testing, performance analysis, and iterative design improvements throughout the development cycle.

Freelance Prototype Developer / Product Designer | Self-Employed

2022 – Present

- Collaborate with clients to translate rough sketches and conceptual ideas into fully functional electronic systems and 3D-printed prototypes.
- Deliver end-to-end product development services covering circuit design, PCB layout, enclosure modelling, and fabrication.
- Support client R&D needs across multiple industries, ensuring prototypes meet functional and structural requirements.

Laboratory Technician | Cagayan State University

February 2024 – October 2024

- Managed and maintained laboratory equipment to ensure operational readiness and accurate experimental results.
- Assisted researchers and students with proper equipment use, calibration, and safety protocols.

EDUCATION

Bachelor of Science in Electronics Engineering

Cagayan State University – Carig Campus | Graduated 2023

TECHNICAL SKILLS

Fusion 360	3D Modelling	3D Printing	PCB Design
Embedded Systems	Electronics Design	R&D	Stress Simulation

NOTABLE PROJECTS

E-Trike Battery Pack & BMS — PNS-Compliant EV Conversion

Engineered a full battery pack and battery management system for converting conventional tricycles to electric drive, compliant with Philippine National Standards. The system is designed for reliability, safety, and local road conditions.

SSCP E-Trike Battery System — Smart Sustainable Community Project

Ongoing development of a battery pack for community-scale E-trikes under the Smart Sustainable Community Project, focusing on energy efficiency and long service life for public transportation use.

Client Prototype Fabrication — Freelance R&D

Delivered multiple custom electronic systems and 3D-printed prototypes for private clients, from concept ideation through fabrication. Projects span IoT devices, sensor systems, and custom mechanical enclosures.

References available upon request.