Kahu Hutton

kahu@kora.ac| (021) 150-3383 | linkedin.com/in/kahu-hutton/ | kahuhutton.com

Electrical Engineering student seeking challenging internship opportunities:

- Founder of Google-startup (KORA).
- Experience in spacecraft hardware-software integration at Dawn Aerospace.
- Skilled in FPGA (RISC-V CPU) and embedded systems (HaloVision).

Work Experience

Dawn Aerospace - Spacecraft Propulsion Development Intern

Dawn Aerospace, **Nov 2024 – February 2025**
Integrated hardware and software to test and validate satellite propulsion systems.

Key Achievements:

- **Life-cycle Testing Efficiency:** Developed software and hardware solutions that reduced manual monitoring time by over 50%, enabling remote monitoring capability for testers from various locations.
- **Platform Accessibility Improvement:** Successfully adapted DawnLink (formerly Linux-only) software to run cross-platform, particularly on Windows, significantly improving workflow flexibility for international teams.
- **Technical Documentation:** Authored detailed installation manuals and user guides for critical in-house tools (YAMCS, DawnLink), effectively streamlining new-hire onboarding.

Wellington City Council – CFD Engineer

Accent Productions, **March 2024**
CFD Wind Load Analysis & Safety Validation Report

Key Achievements:

- **Performed comprehensive wind load analysis** on a stage cover using Autodesk CFD and SolidWorks to determine if critical force thresholds were exceeded.
- Delivered comprehensive CFD analysis materials**—**including **graphs, visualizations, and a risk matrix—highlighting a 19% difference in key safety margins,** underscoring the need for design improvements.
- **Managed the entire analysis process solo**—from geometry development and meshing to simulation setup, convergence studies, post-processing, and report drafting—resulting in actionable design recommendations

KORA – Education Platform (Founder)

Founder, **April 2024 – Present**

Founded and currently leading KORA, an AI-powered education platform offering customized study resources through a full-stack web app.

Key Achievements:

- **Google Startup Recognition:** Awarded $25,000 USD in funding as part of the Ecosystem Tier, recognizing startups associated with established accelerators, incubators, or angel investors.
- **Full-Stack Development:** Developed a scalable, full-stack web application utilizing, Docker, Google Cloud Platform, and Supabase, ensuring robust performance and reliability implemented through CI/CD Jest testing.
- **User Engagement:** Built an active user base of 100+ daily users, generating interest from leading New Zealand institutions such as Victoria University of Wellington and University of Canterbury.

Projects and Research

Reaction timer – FPGA

Project Lead, **April 2025**

Designed a reaction in VHDL on a Nexys-4 DDR FPGA board.

Key Achievements:

- Designed and verified a high-precision reaction timer using VHDL on a Nexys-4 DDR FPGA. Validated performance and accuracy of integrated ALU and PRNG modules through comprehensive simulation in Vivado.

RISC-V CPU – FPGA

Researcher, **March 2025 – Present**

Research with Dr. Romain Arnal on developing an efficient implementation of RISC-V CPU.

Key Achievements:

- Research and development towards custom, efficient RISC-V CPU implementation; integrated custom DMA and peripheral interfaces, validated via SiFive toolchain compilation and hardware UART verification.

HaloVision - Enhancing Motorcycle Safety and Navigation

Project Lead, **2023 – 2024**

Created a motorcycle safety HUD utilizing embedded system design, production and aerodynamic testing.

Key Achievements:

- Engineered an embedded heads-up display for motorcyclists, achieving a 90% increase in power efficiency and a 60% improvement in helmet mount stability through aerodynamic optimization and rigorous physical testing.

Education

Bachelor of Electrical Engineering with Honors. **2023 – 2026**