Ricky Vian Kartolo

Hardware Engineer

National University of Singapore
Bachelor of Electrical Engineering (Honors)
Specializing in wireless communication

Double Major in Innovation and Design Program (*Technopreneurship)*

Tembusu College, UTown College Program (Liberal Arts)

Key Skills
- Self-Motivated
- Adaptable
- Team Player
- Quick Learner
- Ability to work under pressure

Technical Skills
- Embedded system (Cortex M7, NRF52) programming with C
- FPGA design with Verilog and LabVIEW
- PCB Design using Autodesk Eagle
- CAD assembly design with Autodesk Fusion 360

Programming Languages
- Python ●●●●●
- C ●●●●●
- MATLAB ●●●●○
- LabVIEW ●●●○○
- C++ ●●●○○

Languages
- English ●●●●●
- Mandarin ●●●●○
- Bahasa Indonesia ●●●●○

Awards
- Best Hack for NUS-IEEE Hackathon 2018
- Academic Scholarship Awards SJII (St. Joseph Institute International)
- First Prize in International Spaghetti Machine Competition

Work Experiences

Rescale Inc – *Software Engineer* | Jan 2020 – Mar 2020
- Front-End Web Development: Revamped the documentation site for Rescale by adding table of content and search function to the static site.
- Collaborated in streamlining integration testing using python and Jenkins.

TransferFi Pte Ltd – *Hardware Engineer* | Mar 2019 – Oct 2019

Project 1: FPGA Firmware Sensor Communication Design
- Designed and developed I2C FPGA communication with various DAC (Digital to Analog Converter) and I/O extenders that improves 30% accuracy of the beamforming waveform for the next generation power transmitter

Project 2: Nordic NRF52 Embedded System Design
- Collaborated with the software engineer to design system archi0tecture for in-house receiver embedded system which enabled low-powered operations in the receiver module.
- Updated Nordic SDK15 bugs in the BLE (Bluetooth Low Energy) files that helped gain competitive advantage over competitors that did not update it

Project 3: Local Web Interface
- Implementing python Flask for local web server hosted in Raspberry Pi in order to achieve remote control ability for the receiver.

Acoustic Research Laboratory – *Undergraduate Student Researcher*
May 2018 – Mar 2019
- Researched on the effect of the change in depth of vertical array receiver on the correlation of the frequency response
- Assisted a conference paper focusing on water acoustic spatial diversity under 100m.

Selected Collaborative Projects

Autonomous Robotic Monitoring System | Jan 2019 – Present
- Design and develop electrical architecture of the ARMS for ships monitoring system for future predictive maintenance use
- Cooperated with our major stakeholders: Rolls-Royce for technical advices and attended Maritime Industry talks conducted by Pier 71 for market validation
- Shortlisted for the Student TechBlazer Competition for semi-final Judging and qualified in the Smart Port Challenge accelerator

Doppler Radar System Design | Aug 2018 – Dec 2018
- Built a 2.4 GHz Doppler radar transceiver to detect motion, by sourcing components such as oscillators, mixers, and amplifiers after careful signal power analysis, obtaining accurate test results.
- Modelled the expected doppler shifts for various motions using MATLAB to verify the data, resulting in better evaluation of the obtained test results.

Low-altitude Nano-Satellite | Jan 2018 – May 2018
- Design and built the electrical Architecture for the Nano-satellite with a custom PCB design
- Communicated with teams from mechanical and software departments for system integration