RYAN CHAN WEI ZHI

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UCSI University **Kuala Lumpur**

BEng (Hons.) Electrical and Electronic Engineering *Graduation in August 2023*

- **CGPA**: 3.05/4.00 | Dean's List Awarded for the semester Jan – May 2020

Design Projects (Awarded Result: 4.0/4.0 GPA)

Digital Multimeter operated from a Mobile App

Powered from a phone battery and capable of measuring Voltage, Current, Resistance, and Continuity; the device operates on Arduino software and is interfaced to a mobile app developed using Flutter to display measurement values.

Grid-Connected DC/AC Inverter - Power and Control Circuit with Thermal Model

DC to AC Power Inverter with active current control using Park/Clarke transformations between the $\alpha\beta 0$ and dq reference frames for grid synchronization using a PLL, and SPWM to operate below a total V & I harmonics threshold. Implemented a Python Script in Jupyter to simulate incremental component values and a DC Sweep in PLECS.

Digital System of a Vending Machine using Verilog HDL

Mealy Finite State Machine implementation of a money and inventory tracking system using counters and timers.

Smart CCTV for attendance capture via facial recognition with RT data-logging to Thingspeak (*in progress*)

Opensource Haar Cascades image recognition algorithm using OpenCV in Python built on a Raspberry Pi4.

WORK EXPERIENCE

KLK OLEO ~ *a subsidiary of Kuala-Lumpur Kepong Berhad* **Mutiara Damansara**

Electrical and Instrumentation Engineer @ Internship *November 2021 – December 2021*

- Designed DCS functional block diagrams (FBD) related to motor protection and control, instrument performance and data presentation as requested from Process and Production.
- Created VB scripts for extracting DCS data from a historian into a Power BI dashboard for data presentation of time-based process yield, raw materials consumption and other output parameters.
- Conducted a feasibility study on the implementation of Solar Energy harvesting as a potential cost-saving solution across KLK factories and offices.

General System Engineering Sdn. Bhd. **Kota Kemuning, Shah Alam**

Service Engineer @ Internship *September 2021 – November 2021*

- Led a team of 2 other interns in wiring and electrical assembly, in one occasion completing a set of 2 industrial distribution boards in under 48 hours.
- Conducted QC inspections and submitted 200+ pieces of SAT documentation for a plant expansion at *Semperit AG*, Kamunting; and took part in QC meetings with *SemperMed* engineers alongside my supervisor.
- Dealt directly with over 50 customers by taking part in FAT and SATs, and site visits to install and service over 100 ovens, powder coating lines, burners, blowers, dust collectors at customer factories.

SKILLS

- **Analog Design**: Cadence Virtuoso, Cadence OrCad, NI MultiSim, SIMetrix/Simplis, TI-TINA Designsoft
- **Digital Design:** Verilog & VHDL on – Intel Quartus, Xilinx Vivado, Icarus Verilog, Lattice Diamond
- **Scientific Computing**: MATLAB, Scilab and Xcos, GNU Octave, Python SciPy, PyPSA
- **Modelling**: Simulink (Simscape Electrical), PLECS, PSIM
- **DCS, PLC, & SCADA**: Honeywell Experion PKS C300, Omron CX-Programmer, SIEMENS SIMATIC
- **Programming and Scripting**: C, C++, PIC Assembly language, Python, Julia, LaTeX, Visual Basic, TCL
- **Hardware Fabrication**: MIG, TIG, SMAW Welding, Soldering Iron, Hand-drill, Grinder, Oxy Cutter
- **Productivity and Insight**: MS Word, MS Excel, MS Power Automate, MS Power BI

CAMPUS INVOLVEMENTS

Bursa Young Investor Club (BYIC) at UCSI | Event Team *May 2021 – Present*

- Collaborated with 2 other planners in the proposal and organization for a forum by the personal finance duo FIRL on the subject of Fundamental Analysis in stock investing.

UCSI Muay Thai Club | Vice President *September 2021 – February 2022*

- Coordinated bi-weekly training alongside the coach and President; and organized briefing sessions every semester on a university-wide 'Club's Day' to introduce Muay Thai to aspiring members in an enjoyable manner.