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EDUCATION

Nanyang Technological University (NTU) Aug 2019 – **Jun 2023**
- **Bachelor of Engineering (Electrical and Electronic Engineering)**
- **NTU Science and Engineering Undergraduate Scholarship** Aug 2019 **– Jun 2023**
- **Honours (Highest Distinction)** (Expected); current CGPA: 4.85 / 5.00
- **2* Dean's List** (2019 - 2020) (2020-2021)
- **Specialisation**: **Electronic Engineering** (**Integrated Circuit Design**)
- Relevant Modules: (1) *Semiconductor Devices and Processing* (2) *Integrated Electronics* (3) *Microelectronic Devices* (4) *Mixed Signals Integrated Circuit Design* (5) *Radio-Frequency IC design*

SKILLS

- **Software Programming**: C Language, C++, Python, Arduino, Assembly Language: ARM, Verilog HDL, Git, Bash shell
- **Software Applications**: Xilinx Vivado, Cadence Virtuoso, Intel Quartus, ModelSim, LTSpice
- **Equipment / Hardware**: FPGA, ESP32 Development Board, Raspberry Pi 4b

ACADEMIC PROJECTS / COMPETITION PROJECTS / RESEARCH EXPERIENCE

NTU Research Apprentice Program Mar 2022 – **Apr 2023**
Final Year Project: ***Side-Channel Analysis On FPGA-Accelerated Neural Network Implementation***
- Apply two software programming (i.e. **Verilog, C Language**) to implement *Convolutional Neural Network* (CNN) **AcceLeNetor** for recognizing hand-written digits in De0-Nano Board.
- Transplant CNN to *Chipwhisperer Capture Board* for power-trace-monitoring thereby reverse engineering CNN (i.e. Structures, Weights) on board in hardware aspects.

NTU High-Performance-Computing Team (Team of 6) Mar 2021 – **Nov 2022**
- Assume role as **System Administrator** to operate and maintain high-performance supercomputer.
- Assumed role as **Hardware Engineer** to manage hardware (e.g. A100 Data Center Cards, Mellanox Infiniband Cards).

Student Cluster Competition (Team of 6) in SuperComputing Conference 2022 in Dallas, US **Nov 2022**
- **Attained 2nd Ranking** among 10 in-person global university teams.

2022 ISC Student Cluster Competition (Team of 5) May 2022 – Jun 2022
- Assumed role as **In-Charge** to compile and optimize computational chemistry tools (e.g. NwCHEM)
- **Achieved 4th Ranking** in NwCHEM Challenge among 16 global university teams.
- **Attained 6th Ranking** among 16 global university teams.

2021 APAC-HPCAI Competition (Team of 5) 18 Nov 2021
- Optimized compilation flow and scheduled resources for high performance software application "GROMACS"
- Recognized as **3rd Prize Awardee** among 37 Asian University Teams.

NTU URECA (Undergraduate Research Experience on CAmpus) Aug 2020 – Jun 2021
URECA Project: ***Automation Designing for Hardware Reliability Analysis***
- Explored integrated circuit design and automation in two specific fields: (1) Integrated Circuit Design (2) Hardware Design Verification & Validation.
- Acquired knowledge, skill and ability in hardware design tools usage (i.e. Verilog, Cadence Virtuoso, Modelsim) with insight into specific analysis of hardware designing process.
- Utilized **Python Programming** to precisely calculate soft error rate in chip for space-level usage.

INTERNSHIP EXPERIENCE

MediaTek Singapore Pte Ltd, *GPU/APU Design Verification & Implementation Engineer* Dec 2021 – May 2022
- Trained in Synopsys/Cadence Systhesis tools (e.g. FusionCompiler, Genus/iSpatial).
- Contributed to NVE synthesis flow in APU design.
- Deployed EDA tool and IC design knowledge to analyse SOC chip performance.
- **Project**: Written a GUI in **Python** to monitor Synthesis item checklists.

Fourth Paradigm Southeast Asia Pte Ltd, *R&D Developer* (Technology) May 2021 – Aug 2021
- Contributed to Pafka Project in software stability testing and feature development

Internship Project: ***Persistent Memory Accelerated Kafka*** (Team of 8)
- Collaborated with Software Development Engineer to improve robustness of Persistent Memory Accelerated Kafka in terms of open-source (for community maintenance) and closed-source (for commercial usage)
- Trained in **Java Programming** and Persistent Memory Library usage (i.e. llpl, pcj).
- Deployed two software programming (i.e. **Java, Scala**) for enabling multi-level cache storage.
- Implemented and performed testcases for single and multi-broker usage in software "pafka"

LEADERSHIP / CO-CURRICULAR ACTIVITIES / COMMUNITY INVOLVEMENT / VOLUNTEERISM

Institution of Engineering & Technology (IET-NTU)

Vice-President Aug 2021 – Jun 2022
Event Director Aug 2020 – Jun 2021
Event Manager (Publicity) Aug 2019 - Jun 2020