Cato Yuan Wen

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Education

New York University 2021.09 – Today

- Major: Electrical and Computer Engineering
- Minor: Financial Engineering
- GPA: 3.919

Shanghai High School International Division 2017.09 – 2021.05

- International Baccalaureate Program 43/45
- Computer Science High Level 7/7
- Math Application & Approaches High Level 7/7
- Computer Science Extended Essay 3/3

Relevant Coursework

Very Large Scale Integration (NYU) A

- Used Cadence Virtuoso EDA Suite to design and simulate circuit designs
- Learned about basic semiconductor physics, CMOS fabrication, combinational logic circuit design, transistor sizing, and more

Circuits (NYU) A

- Used oscilloscopes, digital multimeters,waveform generators, Arduino in experiments
- Learned the calculation and design of BJT, MOSFET, small signal, and operational amplifier circuits

Advanced Linear Algebra and Complex Variables (NYU) A-

- Learned about complex integration, Cauchy Riemann Equations, Cauchy Goursat, Gram Schmidt process, QR decomposition, matrix diagonalization, LU decomposition, and SVD decomposition
- Can complete linear regression using vector projects and compress images using SVD decomposition

Very Large Scale Integration (Coursera) honor

- learned about various digital logic techiniques such as Shannon expansion, network repair, checking satisfiability, multilevel logic synthesis, and ASIC placement

Work Experience

Synopsys - Technical Intern 2022.06 – 2022.08

- Wrote simple scripts to process and format data. Also used simple statistical models to analyze the placement of clock sinks in clock tree synthesis

Analogic - Intern 2022.01 – 2022.02

- Translated over 300 pages of FPGA documentation from Chinese to English, helped prepare powerpoint presentations, and took notes during meetings

Past Projects/Papers

International Baccalaureate Extended Essay

- Analyzed various methods to reduce inference time for FPGA based CNN accelerators. Methods include early exits, pruning, and the tiling algorithm

International Artificial Intelligence Fair

- Developed neural network with two peers to predict bus delay for Toronto. Acquired and preprocessed data such as weather conditions, holidays, and traffic accidents

Technical Skills

- Languages (comfortable): English, Chinese, Python, C++, Verilog
- Languages (beginner): Java, React, Javascript, HTML, CSS
- Libraries: Numpy, Pandas, CV2, Sklearn, Tensorflow, Dlib, Pickle, Selenium, Scrapy, Tkinter
- Misc: Cadence Virtuoso