J. Jerry **Cheng**

ELECTRICAL AND COMPUTER ENGINEERING

Ann Arbor, MI, 48105

🏠 https://isobutylcyclopentane.github.io/ | 🐙 Isobutylcyclopentane | 💼 chengj8

Actively seeking electrcial and computer engineering related internship in Summer 2022

Education

University of Michigan   *Ann Arbor, MI*

M.S. IN ELECTRCIAL AND COMPUTER ENGINEERING   *Aug. 2021 - May. 2023 (expected)*

- Current Track: Signal, Image Processing and Machine Learning
- Courses: Computer Vision, Matrix Method for Machine Learning

Rensselaer Polytechnic Institute   *Troy, NY*

B.S. IN ELECTRCIAL ENGINEERING   *Aug. 2017 - May. 2021*

- GPA: 3.88/4.0
- Courses: Distributed Learning, Image Processing, VLSI Design, Communication System, Digital Signal Processing, Physical Chemistry, Organic Chemistry
- Professional Societies: TBP Engineering Honor Society, Rensselaer Chemical Society, Toast Rensselaer(**Founder**)
- Clubs: RPI Players(Playhouse Lighting Board), Rensselaer Christian Association

Skills

Programming	**Python**, **C/C++**, Verilog, VHDL, Matlab, Julia
Python Libraries	numpy, scipy, PyTorch, matplotlib, Flask (web framework),
Programming Related	**Linux** experience (Debian Derivatives, Ubuntu mainly), LaTeX, HTML5, and limited Boostrap/jQuery experience
Engineering Related	Siemens NX CAD, SolidWorks, Soldering, **Oscilloscopes**,
Electrcial Related	Microcontrollers (Silicon Lab, Arduino), Embedded Systems, **FPGA**(Xilinx Vivado/Vitis on Zynq and Artix-7), **Cadence Virtuoso**, OrCAD PSpice
Chemistry Related	Organic Chemistry, Spetroscopic Analysis(Mass Spect, IR, NMR), Laboratory Safety and Chemical Hygiene Plan
Languages	English (bilingual proficiency), Chinese (native language)

Experience

Volunteer Matching Software (Prof. Jennifer Pazour)   *Troy, NY*

DEVELOPMENT OF A WEB APPLICATION FOR SUPPLIER DRIVEN SYSTEMS RESEARCH   *Sep. 2020 - Dec. 2020*

- Fully self-developed Python server backend on a public deployment-ready scale (Apache HTTP server)
- Deployed and tested among 100+ students as service providers
- Utilizing Boostrap, JQuery and Jinjia to cooperate with the frontend developers
- IRB experience involving working with data collected from real users

Undergraduate Research, Superlattice Surface Characterization(Prof. Gwo-Ching Wang)   *Troy, NY*

DEVELOPPING ALGORITHMS FOR FASTER CURVE FITTING AND VISUALIZATIONS   *Sep. 2018 - December. 2020*

- Analyzing the surface characteristics of superlattice from AFM and RHEED
- Developed the "initial guess" method that can greatly reduce the curve-fitting computation
- About 50% computation time reduction from original method

Honors & Awards

Apr. 2018	**Exceptional Performance in Computer Science**, Department of Computer Science, RPI	*Troy, NY*
May. 2021	**Dean's Honor List**, School of Engineering, RPI	*Troy, NY*
Jun. 2016	**President's Award for Educational Excellence**, U.S. Secretary of Education	*Bennington, VT*