Cheng-Hsiang Chiu

https://cheng-hsiang-chiu.github.io/

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Education

- **University of Utah** — Salt Lake City, USA
  Ph.D. in Electrical and Computer Engineering — *Aug. 2020 – Present*
- **École Polytechnique Fédérale de Lausanne** — Lausanne, Switzerland
  Master of Science in Computer Science — *Sep. 2013 – Feb. 2016*
- **National Chiao Tung University** — Hsinchu, Taiwan
  Master of Science in Communication Engineering — *Sep. 2005 – Aug. 2007*
- **National Chung Cheng University** — Chiayi, Taiwan
  Bachelor of Science in Electrical Engineering — *Sep. 2001 – Jun. 2005*

Ongoing Projects

- **VLSI Floor Planning**: Developing a floor planner which maps a 3-D finite element model onto a 2-D Cerebras CS-1 wafer scale supercomputer in 2021 ISPD contest.
- **Taskflow**: Adding sycl standard to the general-purpose parallel and heterogeneous task programming system.
- **High Performance Computing**: Working on GPU and parallel programming for certain functions in Taskflow.

Past Projects

- **Edge Computing**: In-situ edge devices to reduce power consumption in Arctic tundra.
- **Privacy Protection**: Technique to prevent malicious Apps from profiling consumers' privacy.
- **Recommender System**: Technique to alleviate the cold start problem by the help of Amazon Mechanical Turk.
- **Multimedia Streaming**: Platform to stream data.

Experience

- **UiT** — Tromso, Norway
  Doctoral Researcher — *Feb. 2019 - Dec. 2019*
  - **Edge computing**: Implemented an energy efficient framework which is used to classify Arctic wild animals in-situ for the purpose of investigating in the impact of global warning over animals living in Arctic tundra.
  - **Power data**: Performed data cleansing and developed visualization framework of power data in Tromso, Norway.
- **University of Khalifa** — Abu Dhabi, UAE
  Assistance Researcher — *Jan. 2018 - Nov. 2018*
  - **Graphene**: Automated and parallelized python-meep for materials modeling at the nanoscale, process measured data of self-grown graphen, develop data visualization frameworks and apply autoencoder technique to speed up simulations.
  - **Sand classification**: Developed classification techniques to obtain the components of sands and make suggestions if targeted sands are feasible elements for bricks for constructions in Nigeria.
- **CERN** — Geneve, Switzerland
  Software Developer — *Mar. 2015 - Aug. 2015*
  - **Consistency checking**: Developed a kernel package to discover devices on the network, perform consistency checking with the installation databases, and monitor the status of the data acquisition network.
- **National Chiao Tung University** — Hsinchu, Taiwan
  Research Assistant — *Jan. 2009 - Jun. 2013*
  - **Intelligent environment**: Coordinated and built vision-based surveillance system in a campus and streamed the video over the self-designed platform.
  - **Data center**: Constructed a data center for brain images storage.