Cheng-Hsiang Chiu

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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

- **Pipeflow/Taskflow**: Developing a pipeline scheduling framework on top of Taskflow.
- **syclFlow**: Leveraging a task graph algorithm of CUDA graph into a SYCL runtime.

PAST PROJECTS

- **VLSI Floor Planner**: A floor planner mapping a 3-D finite element model onto a 2-D wafer scale supercomputer.
- **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.

EXPERIENCE

- **Cadence** — Texas, USA
  Software Intern — *May 2021 - Aug. 2021*
  - **Buffer Insertion Acceleration**: Accelerated the executions of buffer insertion algorithm by 16%.

- **UiT** — Tromso, Norway
  Doctoral Researcher — *Feb. 2019 - Dec. 2019*
  - **Edge computing**: Implemented an energy efficient framework to classify Arctic wild animals in-situ.
  - **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 python-meep for materials modeling and designed data visualization frameworks for it.
  - **Sand classification**: Developed classification techniques to obtain the components of sands 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.

PUBLICATIONS

Conference papers include 3 in parallel computing (2 submitted), 4 in networking, and 2 in computer vision.

SKILLS

- **Language**: C, C++, Python, Javascript, HTML, SQL
- **Unit Test**: doctest
- **Profiler**: gprof, perf
- **Programming Model**: Taskflow, SYCL, oneTBB (Pipeline)