Ethan Tseng

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Education	**Princeton University**
	Third year PhD student in Computer Science advised by Prof. Felix Heide
	*GPA: 3.78	Expected Graduation 2023*
	Carnegie Mellon University
	BS in Electrical and Computer Engineering with Additional Major in Computer Science
	*GPA: 3.93	Class of 2018*

Publications

Hardware-in-the-loop Phase Retrieval for Holographic Near-Eye Displays
- Praneeth Chakravarthula, Ethan Tseng, Tarun Srivastava, Henry Fuchs, Felix Heide
  SIGGRAPH Asia 2020

Learning Rank-1 Diffractive Optics for Single-shot High Dynamic Range Imaging
- Qilin Sun, Ethan Tseng, Qiang Fu, Wolfgang Heidrich, Felix Heide
  CVPR 2020 (Oral)

Hyperparameter Optimization in Black-box Image Processing using Differentiable Proxies
- Ethan Tseng, Felix Yu, Yuting Yang, Fahim Mannan, Karl St. Arnaud, Derek Nowrouzezahrai, Jean-François Lalonde, and Felix Heide
  SIGGRAPH 2019

Automated Detection of Left Ventricle in Arterial Input Function Images for Inline Perfusion Mapping using Deep Learning: A study of 15,000 Patients
- Hui Xue, Ethan Tseng, Kristopher D Knott, Tushar Kotecha, Louise Brown, Sven Plein, Marianna Fontana, James C Moon, Peter Kellman
  Magnetic Resonance in Medicine

Persona: A High-Performance Bioinformatics Framework
- Stuart Byma, Sam Whitlock, Laura Flueratoru, Ethan Tseng, Christos Kozyrakis, Edouard Bugnion, and James Larus
  USENIX ATC 2017

Experience

Research Intern – NHLBI Medical Signal and Image Processing
Bethesda, MD | Summer 2018
- Worked with Dr. Peter Kellman on designing residual U-Net for detecting left ventricle in myocardial perfusion MR scans for determining arterial input function

Undergraduate Student Researcher – CMU Image Science Lab
Pittsburgh, PA | Summer 2017
- Worked with Prof. Aswin Sankaranarayanan on developing camera-projector system for measuring light transport in 3D space

Research Intern – EPFL Very Large Scale Computing Laboratory

Lausanne, Switzerland | Summer 2016

- Worked in Prof. James Larus' group to optimize high-throughput and low-latency genetic sequence aligner

Software Engineering Intern – Cadence Design Systems

Beijing, China | Summer 2015

- Developed code for the Analog Hardware Description Language (AHDL) section of Spectre, a circuit simulation language

Teaching	**Lead Graduate Assistant Instructor – Princeton COS 597A (Imaging the Invisible)** *Princeton, NJ	Fall 2020* **Lead Graduate Assistant Instructor – Princeton COS 426 (Graphics)** *Princeton, NJ	Spring 2020* **Graduate Assistant Instructor – Princeton COS 217 (Intro Systems)** *Princeton, NJ	Fall 2019* **Academic Development Peer Tutor – CMU** *Pittsburgh, PA	Fall 2015, Spring 2016* **Teaching Assistant – CMU 15-150 (Functional Programming)** *Pittsburgh, PA	Fall 2015*
Outreach	**20K Inspirational Stories Contributor – Día de la Ciencia** *Princeton, NJ	Summer 2020* **Graduate Research Instructor – Princeton AI4ALL** *Princeton, NJ	Summer 2019*
Skills	Python, TensorFlow, PyTorch, MATLAB, C, C++, Latex, Git
Awards	ISMRM Workshop on Machine Learning Part II, 2018 – Third Place Award for Poster Abstracts Carnegie Institute of Technology Research Honors Carnegie Mellon University Dean's List (Fall 2014, Spring 2015, Fall 2015, Spring 2016, Fall 2016, Fall 2017, Spring 2018) CMU Mobot Competition 2016 – The Ben Brown (Judges) Choice Prize CMU Mobot Competition 2015 – Undergraduate Category: Second Prize International Baccalaureate Diploma (Score: 45 / 45)