# Philip Yao

## EDUCATION

**University of Michigan-Ann Arbor**
B.S.E Computer Science & B.S.E Electrical Engineering — Graduated 04/2020

- GPA: 3.87/4.00
- Summa Cum Laude, Engineering Honors Program, Dean's List, University Honors
- Classes: Machine Learning, Computer Vision, Computer Security, Embedded Systems, Computer Architecture

**RWTH Aachen University** — Summer 2017 in Aachen, Germany

- Research/Study abroad which involved programming an Arch Linux microprocessor & also studying German

## WORK EXPERIENCE

**Software Development Engineer**
*Amazon* — May 2020 - Now in Seattle, WA

- Alexa AI, Intelligent Decisions, Ranking and Arbitration Science Team
- Worked on Alexa's user intent ranking deep learning model and the infrastructure/data pipeline used to train it
- Automated processes using AWS and Amazon's CI/CD

**Teaching Assistant**
*University of Michigan* — September 2019 – December 2019 in Ann Arbor, MI

- Instructor for EECS 314: Electrical Circuits, Systems, and Applications
- Planned and taught a discussion section, laboratory section, and graded lab reports and exams

**Machine Learning Student Researcher (NSF REU)**
*Cal Poly Pomona* — April 2019 – September 2019 in Pomona, CA

- Generated adversarial 3D models in Pytorch using a differentiable renderer (Neural 3D Mesh Renderer) and ran many experiments investigating black-box attacks

**Photonics Student Researcher**
*University of Michigan* — April 2018 - April 2019 in Ann Arbor, MI

- Created an optical setup to generate Fresnel holograms using Matlab, a spatial light modulator, and other optical equipment advised by Prof. Anthony Grbic

**Electrical Engineer Co-op Intern**
*Rockwell Collins* — August 2017 – December 2017 in Cedar Rapids, IA

- Worked on flight deck hardware, mainly on the flight control panel (FCP 5150) for the Advanced Regional Jet
- Analyzed schematics, mechanical assemblies, and printed wiring board of avionic equipment for debugging test failures

**Computational Biology Student Researcher (NSF REU)**
*Texas State University* — June 2016 – September 2016 in San Marcos, TX

- Implemented machine learning algorithms to group melanoma patients into gene modules to predict survivability, and earned an excellent project award
- Used R and the Weighted Gene Co-Expression Network Analysis (WGCNA) R package to create a correlation network by clustering gene expression data into gene modules

**Sales Representative**
*Toronto Star* — August 2013 – December 2013 in Toronto, Ontario

- Sold subscriptions of the Toronto Star newspaper to neighborhoods from door to door

## PUBLICATIONS

- Zainulabadeen, A.*, Yao, P.*, & Zare, H. (2017). Underexpression of specific interferon genes is associated with poor prognosis of melanoma. *PloS one*, *12*(1), e0170025.
- * Co-First Author
- Yao, P., So, A., Chen, T., & Ji, H. (2020). On Multiview Robustness of 3D Adversarial Attacks. In *Practice and Experience in Advanced Research Computing* (pp. 372–378). Association for Computing Machinery.
- Yao, P., So, A., Chen, T., & Ji, H. (2020). Multiview-Robust 3D Adversarial Examples of Real-world Objects. In *CVPR 2020 Workshop on Adversarial Machine Learning in Computer Vision* (Poster/Short Paper).

## MISCELLANEOUS

- **Technical Skills**: C++, C, Python, PyTorch, Java, Matlab, R, Linux, Git, Verilog, SystemVerilog, systemD, Multisim, DxDesigner, CREO, ADS, soldering, Arm Cortex-M3, RISC V, Alpha ISA, AWS
- **US Citizen**