Winston Chen

FIND ME AT:

Location: Seattle, WA
Telephone: 206-398-9262
winstonchen999@gmail.com
https://winstonchenn.github.io

SKILLS

Programming Language:
Python, JavaScript, Java, C, C++, BashScript, System Verilog, Ruby

Tools & Frameworks:

- Machine Learning: Scikit-learn, PyTorch, Keras
- Computer Vision: OpenCV
- Data Processing: Pandas, NumPy, Matplotlib, SciPy
- Version Control: Git
- Front-end Developments:
- React.js, React Native
- Data-base: Firebase, MySQL
- Hardwares: DE1-SoC, Raspberry Pi Zero

Soft Skills
Teaching, Researching, Public Speaking

Language
English & Mandarin

HONORS & AWARDS

Mary Gates Research Scholarship

- March 2021
- Mary Gates Endowment for Students

Herschel & Caryl Roman Scholarship

- July 2020
- University of Washington, Department of Genome Science

Lawrence & Lucille Frey Endowed Electrical & Computer Engineering Scholarship

- July 2020
- University of Washington, Department of Electrical & Computer Engineering

Google Cloud COVID-19 Hackathon Fund

- September 2020
- DubHacks (Hack'20 Hackathon)

EDUCATION

UNIVERSITY OF WASHINGTON (UW) | SEATTLE, WA | *Class of 2022*

- Bachelor of Science in Electrical & Computer Engineering with Minor in Entrepreneurship

ACADEMIC EXPERIENCE

TA FOR DIGITAL CIRCUIT AND SYSTEM (EE 271)

UW ECE* | *10/2021-present

- Guided 60+ ECE students interested in learning boolean algebra, combinational and sequential logic circuits design, and FPGA programming using System Verilog.
- Hosted weekly lab/office hours.
- Graded students' lab assignments and exams.

TA FOR FUNDAMENTALS OF ELECTRICAL ENGINEERING (EE 215)

UW ECE* | *12/2020-3/2021

- Guided 50+ students in an introductory electrical engineering course covering topics such as circuit components, mathematical modeling of systems, and circuit laws.
- Hosted weekly review sessions.
- Graded homework assignments.
- Designed exam questions and assisted exam grading.

RESEARCH ASSISTANT

UW Noble Research Lab* | *7/2019-present

- **Error-controlled Rankprop**
  - Implemented and trained Rankprop, a network propagation-based protein homology detection algorithm in Python.
  - Applied a novel knockoff generation algorithm and knockoff filter on network data.
  - Implemented various error rate estimation algorithms (permutation-based, knockoff filter, and target-decoy competition).
  - Conducted thorough comparisons on different error rate estimation methods.
  - Presented research work at UW's 24th Undergraduate Research Symposium.
- **Error-controlled feature interaction detection for neural network**
  - Experimented with different knockoff variable generation methods (model-X, DeepKnockoff, KnockoffGAN, and DDLK).
  - Built and trained novel MLP architecture that supports error rate estimation.
  - Researched and processed real-world biomedical data for experiments
  - Investigated unexpected experiment results and proposed potential solutions.

INDUSTRY EXPERIENCE

PYTHON ENGINEERING INTERN

NVIDIA*| *6/2021-present

- Helped Clara Parabricks team build their testing infrastructure from scratch.
- Drove discussions with developers across different teams regarding the feature requirement for the testing infrastructure.
- Built and deployed a full stack web app that helps Parabricks developers visualize the log file for hundreds of genomics computing tools.

SOFTWARE ENGINEERING LEAD

KiwiLink*| *6/2020-present

- Cofounded KiwiLink, an iOS/Android mobile app for study buddy finding in the college setting.
- Lead a team of 10 software engineers to build the app from scratch.
- KiwiLink is currently used by 1,300+ users and has fostered 15,000+ connections.

COMPUTER VISION ENGINEER

Advanced Robotics @UW*| *4/2019-present

- Upgraded team's deep learning training infrastructure to PyTorch-lightning-based.
- Implemented new neural network architecture to enable more complex detection behavior.