Ping-Chun Lin

Seattle, WA contact@pingchunlin.com linkedin.com/in/pingchunlin PingChunLin

A research and data scientist with four years of experience in **machine learning**, **computer vision**, and **technical projects**. Motivated to transition from academia to take on applied challenges. Strong ability to think big, innovate, and quickly master new technical fields.

Professional Experience

University of Washington **Sep 2019 - present**

Graduate Researcher funded by the Simons Foundation Seattle, WA

- Developed a novel data-driven approach (linear/lasso regression) to predict key environmental parameters. Reduced analysis time compared to counterpart methods from hours to <10 seconds, enabling rapid application across multiple studies.
- Conducted statistical analysis of previously unused data features from experimental datasets, unlocking new insights and strategies for predictive modeling that led to a research publication.

Global Innovation Fund at UW **Jun 2023 - Sep 2023**

Machine Learning Developer Seattle, WA

- Developed a computer vision pipeline for labeling instances on satellite images using R-CNNs (Detectron2) with high accuracy, reducing **90%** of the processing time and cost for manual labor.
- Co-authored a report to stakeholders about the performance of the model and utilizing machine learning techniques for climate change research.

University of Washington **Jan 2018 - Jun 2019**

Research Assistant funded by NASA Habitable Worlds Seattle, WA

- Developed an application that analyzes feature changes in 6000 images from a time-lapse video and satellite imagery, contributing to Earth and Mars research, with published results in a peer-reviewed journal.
- Co-developed a hydrology model and visualized the output using a digital elevation model in ArcGIS.

Projects and Leadership

Software Developer **Sep 2022 - Dec 2022**

microSWIFT Team, collaboration with UW Applied Physics Lab Seattle, WA

- Co-developed a Rasberry Pi quality control pipeline and produced an open-source package on PyPI for the collaborators and enthusiasts to access the research data from wave buoys.

Lab Instructor **Jan 2021 - Present**

University of Washington Seattle, WA

- Led experiments, graded coursework, and answered questions from 120+ students.
- Mentored five students and designed three remote-friendly lab experiments for effective virtual learning experiences.

Executive Committee Chair **Jan 2021 - Jun 2023**

UW Taiwanese Graduate Student Association Seattle, WA

- Led a team of 20+ members to organize events annually for graduate students and early-career professionals, including social events with the local community and career workshops with alumni.
- Deployed task management tools and a membership database for efficient remote operations of the organization.

Skills

- **Programming languages:** Python (pandas, Tensorflow, PyTorch, sklearn, OpenCV, pillow, GDAL), SQL, Java
- **Numerical modeling:** Numerical models, computer vision, machine learning, time series
- **Other Tools:** Version control (Git), geospatial data analysis (ArcGIS„ Google Earth Engine), Unix/Linux, ETL, Excel
- **Technical Skills:** Technical writing, A/B testing, statistics, data analysis, data manipulation, data visualization

Education

University of Washington **Present**

Ph.D. in Data Science, Earth and Space Sciences and Astrobiology

- Relevant Courses: Database Systems, Complex Systems, Applied Linear Algebra, Software Development

Bachelor of Science in Geophysics **2019**

- Minor: Applied Mathematics

Other Certifications: Deep Learning Specialization (Coursera), Large Language Models (Coursera)