

Ping-Chun Lin

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PROFESSIONAL EXPERIENCE

- Conservation International**, Betty and Gordon Moore Center for Science Jun 2024 - present
Data Scientist Intern Seattle, WA
- Utilized Python and R to implement a data pipeline with Docker and AWS, reducing processing time by **97%** through optimized ETL scripts and parallel processing techniques.
 - Co-developed machine learning models (XGBoost/GAM) for threshold prediction, expanding coverage from 13 to **500+** regions, enhancing relevance to global industries (e.g., agriculture), and enabling tailored decision-making for clients.
 - Presented statistical analysis and visualizations of model predictions to senior leadership and cross-functional teams, delivering scientifically informed insights for sustainability that guided client business strategies.
- Global Innovation Fund**, UW School of Environmental and Forest Sciences Jun 2023 - Sep 2023
Machine Learning Developer Seattle, WA
- Designed and developed an end-to-end computer vision pipeline with Python for labeling instances on satellite images using CNNs and Foundation Models 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**, Department of Earth and Space Sciences Sep 2019 - present
Graduate Researcher funded by the Simons Foundation and NASA Seattle, WA
- Developed a novel data-driven model using linear and lasso regression with Python to predict key environmental parameters. Conducted statistical analysis of previously unused experimental data features, uncovering new insights and strategies for predictive modeling, resulting in multiple research publications.
 - Created an application to analyze feature changes from multi-modal data (visual, sensors) over a time series, with findings published in a high-impact journal.

PROJECTS AND LEADERSHIP

- Software Developer** Sep 2022 - Dec 2022
microSWIFT Team, collaboration with UW Applied Physics Lab Seattle, WA
- Co-developed a Raspberry Pi quality control pipeline and produced an open-source package on PyPI for collaborators and enthusiasts to access the research data from wave buoys for hurricane research.
- Lab Instructor** Jan 2021 - Jun 2024
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, scikit-learn, PySpark), SQL, Java, R, MATLAB, JavaScript
- Machine Learning & Numerical Modeling:** Deep learning, Transformers, Foundation Models, Optimization, Computer Vision, Embedding, Clustering, Causal Inference, Time Series Forecasting (ARIMA), CUDA, LLM
- Data Science & Tools:** Statistics, A/B testing, Data Cleansing, Data Visualization (plotly, Seaborn, ggplot2), Data Mining (Spark, MapReduce), ETL, EDA, Jupyter, Git, Unix/Linux, Docker, AWS, Excel, React, Postgres, GIS (GDAL, QGIS, ArcGIS)

EDUCATION

- University of Washington**
- M.S. in Applied Mathematics & M.S. in Earth and Space Sciences *GPA: 3.84/4.0* Jun 2025
- Relevant Courses: Machine Learning, ML for Big Data, Software Development, Database Systems, Applied Linear Algebra
- B.S. in Geophysics and Minor in Applied Mathematics *GPA: 3.76/4.0* Jun 2019
- Certifications:** Deep Learning Specialization (Coursera), Large Language Models (Coursera)