Ping-Chun Lin

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PROFESSIONAL EXPERIENCE

Conservation International, Betty and Gordon Moore Center for Science

Jun 2024 - Sep 2024

Data Scientist Intern

Seattle, WA

- Implemented a data pipeline with Docker and AWS, reducing processing time by 95% 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 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 approach using linear and lasso regression 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 multimodal 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 the 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
- Machine Learning & Numerical Modeling: Deep learning, Transformers, Foundation Models, Computer Vision, Optimization, Embedding, Clustering, Causal Inference, Time Series Forecasting (ARIMA), CUDA, LLM
- Data Science & Tools: Statistics, A/B testing, Data Cleansing, Data Visualization, Data Mining (Apache Spark), ETL, Jupyter, Git, Unix/Linux, Docker, AWS, Excel

EDUCATION

University of Washington

M.S. in Applied Mathematics GPA: 3.84/4.0

Jun 2025

M.S. in Earth and Space Sciences

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)