WEI-CHIH HUANG

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OBJECTIVE

Physics PhD candidate with extensive data analytical skills, actively seeking opportunities in ***data science/analysis*** within a vibrant and intellectually stimulating learning environment.

EDUCATION

PhD in Physics, Texas A&M University, US — Aug. 2019 - Aug. 2025 (expected)
BS in Physics, National Tsing Hua University, Taiwan — Aug. 2015 - Jun. 2019

EXPERIENCE

Independent Data Science Researcher - Pro Cyclists Race Analysis (github repo) — Apr. 2022 - present

- Achieved 20% better performance than a trivial model with machine learning models using Pytorch
- Boosted web scraping BeautifulSoup by 500% with multi-threading
- Preprocessed the data (clean, format, normalize) with NumPy, Pandas, SciPy, and scikit-learn
- Saved 80% costs compared to AWS, GCP, Azure by deploying data and model to Runpod (GPU cloud)

Data Science Ambassador - Physics Department, Texas A&M University — Aug. 2022 - Aug. 2023

- Provided training and consulting to the department and the students (webpage)
- Designed interactive workshops on topics including Python, Linux, statistics, data analysis, and machine learning

Project Manager - Aggie Coding Club — Jan. 2022 - Jan. 2023

- Led a 10-people team and developed a dynamic and responsive website using Django (Python)
- Deployed the website at zero cost on Heroku cloud platform
- Built a referral website to reduce the time of networking by 40%
- Designed PostgreSQL database schema to save the disk space by 20%

Research Assistant - Physics Department, Texas A&M University — Aug. 2019 - present

- Built physical model and conducted the statistical analysis on the large multi-dimensional data by Python
- Accelerated the analysis by 1000 times with improved algorithm, multiprocessing, caching, and C/C++
- Published 5 papers in high impact journals and presented several successful talks at international conferences

Teaching Assistant - Physics Department, Texas A&M University — Aug. 2019 - Dec. 2022

- Taught and graded college Newtonian Mechanics, Electromagnetism, Thermodynamics, and Statistical Mechanics
- Demonstrated hands-on experiments and post-lab data analysis

CERTIFICATIONS

- Machine Learning Foundations: Algorithmic Foundations
- Machine Learning Foundations: Mathematical Foundations
- Machine Learning Techniques
- Divide and Conquer, Sorting and Searching, and Randomized Algorithms
- A Crash Course in Causality: Inferring Causal Effects from Observational Data

SKILLS

Languages	Python, Bash, C/C++, SQL, Mathematica, Javascript, HTML, CSS
Concepts	Statistics, Algorithm, Machine Learning, Deep Learning, Cloud computing, API, Database, OOP
Libraries	NumPy, Matplotlib, Pandas, SciPy, Streamlit, PySpark, multiprocess, scikit-learn, BeautifulSoup
Frameworks	PyTorch, TensorFlow, Django, PostgreSQL, PyQt5
Tools	Git, GitHub, Linux, Docker, Heroku, Kaggle, Google Colab, Runpod