

WEI-CHIH HUANG

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EDUCATION

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

EXPERIENCE

Data scientist internship - Capital One Auto Finance	Jun. 2025 - Aug. 2025
<ul style="list-style-type: none">Reduced 10% loss for auto loans with machine learning models (GBM, NN, LSTM) deployed on AWSImproved AUC by 10% for future payments and default probabilityDesigned customized PyTorch model, training loop and loss function to better align with business needsBuilt a scalable data pipeline that fetched 10TB+ data from Snowflake and processed analysis on AWS	
Research Assistant - Physics Department, Texas A&M University (researcher profile)	Aug. 2019 - Jun. 2025
PhD dissertation on high energy dark matter particle search	
<ul style="list-style-type: none">Published 7 papers in top journals and presented at international conferencesProcessed 1B+ rows of multi-dimensional data with Python/PySpark and accelerated analysis 1000× using C++, multiprocessing, and cachingOrchestrated large-scale distributed data processing and HPC optimization using MPI/OpenMP and PySparkReduced particle simulation runtime by 90% with ML models (scikit-learn and PyTorch)Cut visualization runtime by 80% using optimized NumPy/Pandas/Matplotlib workflowsBuilt an interactive platform agnostic data dashboard using Streamlit and Docker	
Quantitative Researcher/Engineer - Aggie Quant Fund	Jan. 2024 - Dec. 2024
Application of cutting-edge technologies to financial market	
<ul style="list-style-type: none">Managed \$100,000 fund and developed models for stock forecasting and portfolio optimizationOutperformed S&P500 by 200% by AI-driven strategies (sentiment analysis, LLMs, alpha research)Automated market insight extraction with LLM-powered pipelines, GitHub Actions CI/CD, and cloud APIsSaved 70% query time by high-performance market database (InfluxDB and PostgreSQL)Collaborated in a 10-person team to optimize portfolio, mitigate risks and monitor trades	
Full-Stack Web Developer/Project Manager - Aggie Coding Club	Jan. 2022 - Jan. 2023
Dynamic website designed to cater to students' job-seeking requirements	
<ul style="list-style-type: none">Built a referral website to reduce the time of networking by 40%Led a 10-member team to build and deploy a job referral web platform on Heroku with Django/PostgreSQLOptimized schema design to reduce disk usage by 20%, cutting hosting cost	

SKILLS

ML/AI	PyTorch, scikit-learn, TensorFlow, NLP, Transformers
MLOps/Infra	AWS, Snowflake, Linux, Docker, Kubernetes, Git, GitHub Actions, CI/CD, MPI/OpenMP
Data/Database	NumPy, Pandas, SciPy, PySpark, InfluxDB, PostgreSQL
Languages	Python, Bash, C/C++, SQL
Visualization	Matplotlib, Seaborn, Streamlit