WEI-CHIH HUANG

EDUCATION
Email ◇ Linkedin ◇ Github ◇ Personal Website

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

PROJECTS

Aggie Job Referral - Django, SQLite, PostgreSQL, Heroku, Bootstrap — website
- Create referrals/openings matching website to reduce the time networking by 40%.
- Deploy to Heroku and utilize PostgreSQL as database

PyBigstick - NumPy, Pandas, Matplotlib, Streamlit, Docker — github
- Auto-generate input scripts for BIGSTICK (code for nuclear physics research)
- Save 95% of time writing input scripts
- Analyze any nucleus and predict experimental outcomes
- Create interactive data dashboard with Streamlit
- Virtualize the app with Docker to run on any machine

Pro Cyclists Race Analysis - NumPy, Pandas, SciPy, BeautifulSoup, scikit-learn, XGBoost, Pytorch — github
- Web scraping the data from an organization website by BeautifulSoup
- Increase the web scraping speed by 5 times with multi-threading
- Use scikit-learn, XGBoost, and Pytorch to build linear, RF, DNN, RNN models and predict the race outcome with 20% better than a trivial model

Curve Fitting GUI - SciPy, NumPy, Matplotlib, PyQT — github
- User friendly graphical user interface tool for curve fitting

RESEARCH EXPERIENCE

Inelastic Neutrino-Nucleus Scattering by BIGSTICK (Large Scale Nuclear Shell Model Code) — arxiv
- Deploy BIGSTICK to MPI/OpenMP in computer cluster
- Virtualize BIGSTICK with Docker to resolve the incompatibility with the cluster
- Analyze the multi-dimensional outputs by Python and Mathematica.
- Present several successful talks at workshops slides

Searching for Axions in High Energy Physics Experiments — arxiv
- Construct analytical models for axion (a theoretical particle) in the experiments
- Modularize and automate the statistical analysis

EXTRA-CURRICULAR ACTIVITIES
- Project Manager at Aggie Coding Club
- Data Science Ambassador representing Physics Department at Texas A&M

HONORS AND AWARDS
- **FlyUP Project Scholarship (3 years)**
  Tuition wavier, including housing and textbooks

- **Undergraduate Research Scholarship**
  The scholarship for the New Gravity Theory

- **Data Science Ambassador Scholarship**
  Data Science Ambassador Scholarship Program at Texas A&M Institute of Data Science