Hsin-En Huang

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An interdisciplinary fresh graduate, familiar with machine learning models and development of macro economy, interest in web development and renovation technology.

Education

Bachelor of Science in Computer Science 09/2016 –06/2020
National Taiwan University of Science and Technology, Taipei, Taiwan

Master of Arts in Economics 09/2020 –06/2022
National Taipei University, New Taipei, Taiwan

Experience

Research Assistant Advisor: Prof. Mau-Ting Lin 09/2020 –06/2021
National Taipei University, New Taipei, Taiwan

Research Assistant Advisor: Prof. Shou-Yung Yin 09/2021 –06/2022
National Taipei University, New Taipei, Taiwan

- Preprocessing of economic data and visualization with Python and R.
- Assist with course preparation and debugging.
- Check students' homework and answer their questions in the programming class.

Certificates

- Toeic 950
- Senior Securities Specialist

- Financial Derivatives Sales Personnel
- Trust Operations Personnel
- Financial Planning Personnel
- Financial Markets and Professional Ethics

WebSite

1. **My own webpage (https://hamchick.github.io/) github link**

    - I am learning web development through Harvard's online class CS50W and using my own personal information for this front-end project.
    - JavaScript, CSS and basic HTML elements were used to create the static web page.

2. **Django project** "Todo list application" **github link**

    - This project used class-based views with Django and MVT (Model View Template) design pattern I learned from CS50W.
    - I implement user creation, authentication and database interaction with Django logic.

Master Thesis

"Bitcoin Price Forecast Using Echo State Network" **(Thesis link)**

- The Echo State Network is a kind of recurrent neural network with sparsely connected and fixed weights hidden layers.
- Four different model structures are used, including the traditional model ARIMA, the Echo State Network model with different techniques.
- The final result shows Echo State Network with phase space reconstruction can escape from the "Random walk hypothesis" and make efficient forecasts.

Research Project

1. **Independent study** "Fake News Detect" **Report link github link**

    - Use Natural Language Processing (NLP) to analyze news reports and determine whether they are fake news.
    - Both the classification and regression analyses have been implemented, and many different models have been discussed.

2. **Independent study** "Interactive visual dashboard" **github link**

    - This project used a package in R Programming language developed by Prof. Mau-Ting Lin, and I did the part of debugging and testing.
    - The application plots the chosen data with different kinds of methods. The interactive design can apply to any kind of data.

Autobiography

I am passionate about learning and willing to take on new challenges. I am attentive and like to work as part of a team. I enjoy playing badminton during my free time.

Step-by-step, project-by-project

In college, I learned machine learning methods in my independent study. I found that financial data is one of the most common and promising data during the project. Therefore, I felt that if I could acquire deeper financial knowledge, I might be able to interpret these data and their economic meanings. Then I started reading financial news and discovered my interest in finance.

Moreover, I worked as a research assistant in graduate school. I assist the professor in course preparation and debugging. It was a great experience that not only taught me more statistical methods, but also interactive visualization and basic front-end knowledge.

Computer Science background with Economic knowledge

In my spare time, I pay close attention to the development of Cryptocurrency. I have taken courses about cryptography, so blockchain technology is very familiar to me, and I have a positive attitude toward the development of blockchain technology. My master's thesis was forecasting the price of Bitcoin with a machine learning model called the Echo State Network. Combining the economic analysis and machine learning model, I made efficient forecasts of Bitcoin prices with financial index and historical Bitcoin data.

After I finished my military service, I started to self-study about back-end frameworks. I learned Django through Harvard' s online class CS50W, and I built some basic applications like the Todo app, user authentication, and a forum site. Then I started learning .NET and Structured Query Language with some online resources. I hope to can get into the AppWorks School training program to continue to push myself and learn with my peers. Then join 91app company to develop applications that everyone can use in their daily life.