CHI-CHUN CHEN

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Education

University of California Davis(UCD) **September 2024 – January 2026**
Master of Science in Statistics *California Davis, US*

Fu Jen Catholic University(FJCU) **September 2019 – January 2024**
Bachelor of Business Administration *Taipei, Taiwan*

Major: Statistic and Information Science **GPA: 3.61/4**
Minor: Computer Science and Information Engineering
Micro Program: Big Data Cross-domain
Relevant Coursework: Statistics, Data Mining, Deep Learning, Data Structures, Database Administration

Work Experience

Industrial Technology Research Institute **March 2024 – August 2024**
AI Algorithm assistant engineer *Hsinchu, Taiwan*

- Participated in the Taiwan National Film Archive Image Restoration Project, utilizing the PatchMatch algorithm to restore historical film images, ensuring the preservation and enhancement of valuable visual media.
- Contributed to the Garmin Road Image Generation project, employed Stable Diffusion along with the Object Stitching algorithm to generate road images suitable for YOLO detection training datasets, enhancing the accuracy and effectiveness of object detection models.

Industrial Technology Research Institute **May 2023 – September 2023**
Data Analysis AI Algorithm Intern *Hsinchu, Taiwan*

- Participated in the FAST AI project (FAST: federated learning, automated machine learning, self-supervised learning, transfer learning), utilizing AI techniques to analyze upcoming product sales trends, conducting AI assessments on visitor counts at the Matsu Tourist Center, and employing time series analytics for prospective tourism estimations.
- Contributed to the AI Mentor project's development, researching papers on natural language processing to bring forth novel technical perspectives.
- Developed an attention-based model using PyTorch, integrating LSTM to enhance accuracy in time series prediction.
- Assisted in API development of the company's internal system and integrated innovative software functionalities.
- Implemented a CNN-based image classification model and conducted experiments by inversely adjusting the layer architecture of GoogLeNet to assess potential accuracy enhancements.
- Developed an object detection project utilizing YOLO-v4, providing pivotal technical support and innovative directions for the company's image recognition research.

Academic Achievement

International ICT Innovative Services Awards 2022 **December 2021 – December 2022**
The First Place Awards and The Best Popularity Award
Team Leader *Taipei, Taiwan*

- Developed a chatbot with diverse linguistic styles using natural language processing techniques.
- Applied text analytics and used linguistic inquiry and word count dictionary to discern user emotions, ensuring the chatbot responded empathetically.
- Adopted the k-nearest neighbors algorithm to generate chatbot response sentences.
- Researched whether individuals prefer chatting with others of similar MBTI personality types.
- Innovated the "linguistic style model" to diversify and enrich the chatbot's responses.
- Constructed "sentence structure model" for Chinese sentence analysis, capturing and replicating user language patterns.
- Introduced "Word2FunctionVector" technique, transforming words into vector spaces to express semantic meanings and represent grammatical usage.

Projects

Big Data Industry and Education Project| *Python, R, Web Development Technologies* **February 2022 – July 2022**

- Assisted FJU's Student Affairs Division in setting up the Student Counseling Research Software, thus enhancing administrative efficiency.
- Utilized R Shiny to visualize vast datasets on the website, facilitating subsequent analysis and workflow improvements.
- Applied Bayesian inference and Latent Dirichlet Allocation to autonomously sort data and accelerate work efficiency.

Income Prediction Website | *Python, Weka, Web Development Technologies* **January 2022**

- Established a website for predicting income in Taiwan; users can input criteria, including education level, age, and gender, to estimate their potential future earnings.

Housing Category Forecasting System | *Python, Visual Basic Analysis, Weka* **June 2022**

- Forecasting whether a house has an elevator or not by using statistical methods such as Decision Tree, K-means, cross-validation, and Naive Bayes.

Clothes Rental Website | *Web Development Technologies* **June 2023**

- Established a sustainable clothing rental platform in Taiwan that advocates for environmental consciousness.
- In today's fast-fashion society, this platform allows Taiwanese people to enjoy a diverse range of fashionable attire while upholding eco-friendly values. Through this initiative, we can significantly reduce the carbon footprint generated by consumption, paving the way for a greener and more sustainable future..

Leadership

- Member, Girls Volleyball Team, Department of Statistics and Information, FJU
- Team Leader, 2020 Freshman Orientation Tea Party
- Team Leader, 2020 Freshman Orientation Camp

Technical Skills

Languages: Python, Java, C/C++, JavaScript, R, Visual Basic
Developer Tools: VS Code, Google Cloud Platform, Android Studio, Weka
Technologies/Frameworks: Matplotlib, NumPy, Pandas, PyTorch, HTML, CSS, MySQL, PHP, React Native, Visual Basic Analysis, GitHub, WordPress
Certificates: TQC+ Python Programming Language, TQC+ Python Web Data Extraction and Analysis