# 蔡琇鈞 (Tsai Hsiu-Chun)

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### **BRIEF INTRO**

I am a conscientious and responsible guy and have the patience to learn the knowledge I am interested in, thus I can complete the assigned task well. My interests include NLP, web design, etc.

#### **EDUCATION**

- Information Management, BBA, National University of Kaohsiung, Kaohsiung, Sep. 2018 - Jun. 2022
- Information Management, MBA, National Central University, Taoyuan, Sep. 2022 Now



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#### **TECHNICAL SKILLS**

**Programming Skills** C, Java, Python, HTML/CSS, PHP, JavaScript

**Database** MySQL, phpMyAdmin, PostgreSQL

*ML Frameworks* Keras, PyTorch, TensorFlow

Language ability TOEIC: 615 (Jul. 2022)

• hsiuchun

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#### **INTERESTS**

Deep Learning, Machine Learning, Nature Language Processing, Web Design, etc.

#### **JOURNAL**

- T.-H. Yang\*, C.-Y. Wang†, H.-C. Tsai†, Y.-C. Yang†, and C.-T. Liu, "YTLR: extracting yeast transcription factor-gene associations from the literature using automated literature readers," Computational and Structural Biotechnology Journal, vol. 20, pp. 4636-4644, 2022. (SCI 2022 impact factor = 6.155 Ranking 23.6% (70/296) in Biochemistry & Molecular Biology).
- T.-H. Yang\*, C.-Y. Wang†, H.-C. Tsai†, and C.-T. Liu†, "Human IRES Atlas: an integrative platform for studying IRES-driven translational regulation in humans," Database, vol. 2021: article ID baab025; doi:10.1093/database/baab025, 2021. (SCI 2020 impact factor = 3.451, Ranking 24% (14/58) in Mathematical & Computational Biology).
- T.-H. Yang\*, S.-H. Wu<sup>†</sup>, F.-Y. Zhang<sup>†</sup>, H.-C. Tsai, Y.-C. Yang, Y.-Y. Tseng, and W.-S. Wu<sup>\*</sup>, "An automated pipeline to extract the Drosophila modular transcription regulators and targets from massive literature articles," (Under Review).

#### **CONFERENCE**

• C.-Y. Wang<sup>†</sup>, K.-C. Tu<sup>†</sup>, Y.-C. Yang<sup>†</sup>, H.-C. Tsai<sup>†</sup> and T.-H. Yang<sup>\*</sup>, "農作蜜素損傷原因之高效能分類。" In 2021 International Conference on Technologies and Applications of Artificial Intelligence (TAAI): Taichung, Taiwan. (Nov. 2021)

### **PROJECTS**

Comment Sentiment Analysis (Jan. 2023 - Jan. 2023)

• Fine-tuned a BERT model for movie comments with PyTorch.

**Escape Game** (Aug. 2022 - Aug. 2022) 🙎

• A simple web-implementation escape game using JavaScript.

*OpenStreetMap* (May. 2022 - May. 2022) 🙎

• An open street map that instantly displays the remaining number of rapid antigen tests.

### *Pick Up Choose* (Aug. 2021 - Dec. 2021)

- Fine-tuned an EfficientNet model for jujubes injured causes classification.
- Fine-tuned YOLOv4 object detection models to obtain jujube injured location in images.
- Designed an automatic grading application for jujubes on smartphones with Flutter.

## Who's the victim? (Sep. 2020 - Jan. 2021) 2

- Designed a computer game which adapted from the classic board game "Bang!".
- Designed and Implemented game functions, events, and GUI interfaces with Java programming.

## Course Selection System (Mar. 2020 - Jun. 2020) 🕿

- Designed a web-based school course selection system with PHP and MySQL.
- Utilize JavaScript to beautify the appearance of the website.

# Moving Soldier in Maze (Sep. 2020 - Jan. 2021) 🙎

- Designed a simple GUI interface and controlled the soldier moving in the maze.
- Implemented path searching algorithms including DFS, BFS, and UCS.

# Airline Database Design (Mar. 2020 - Jun. 2020) 🙎

- Designed a database from the requirements of the customers and the company.
- Used ERD, Relational Model, UML, and Normalization to systematically construct the database.
- Filtered data from the database with SQL and presented the search results on a simple website.

#### **WORK EXPERIENCE**

### Teaching Assistant

- Artificial Intelligence and Machine Learning in MIS, NCU. (Mar. 2023 Jun. 2023)
- Object-Oriented Programming in IM, NUK. (Mar. 2021 Jan. 2022)
- Design of Database in IM, NUK. (Mar. 2021 Jun. 2021)

### Research Assistant

- Assist Prof. Yi-Cheng Chen (<u>Advanced Data Mining & Learning (ADML) Laboratory</u>) in completing the cases. (Sep. 2022 Now)
- Assist Prof. Tzu-Hsien Yang (<u>Computational Biology & Intelligence System Lab</u>) in completing the experiments of methodology in papers. (Jan. 2021 Sep. 2022)