HAO-TIAN LU 呂顥天

New Taipei City, Taiwan • ted.lu.tw@gmail.com • tedlu-tw.github.io

EXPERIENCES

Research Student Taipei, Taiwan

Institute of Biomedical Sciences (IBMS), Academia Sinica

June 2023 - Present

- Proficiently conducted data science and in-depth analysis of magnetic resonance imaging (MRI) data, with a specific focus on brain connectome research.
- Development of cutting-edge analysis software, and cloud computing infrastructure deployment to optimize data storage and accessibility.
- Actively engaged in advanced studies encompassing neuroimaging, biomedical sciences, and neurosciences, consistently staying abreast of the latest research and breakthroughs in these fields.

Research Assistant Taipei, Taiwan

Department of Computer Science & Information Engineering, National Taiwan University September 2022 - Present

- Led research projects developing advanced algorithms for medical image analysis, specializing in MRI, EEG, and CT scans.
- Conducted experiments to optimize machine learning and deep learning models, notably improving accuracy and efficiency through techniques like hyperparameter tuning, model design, and data augmentation.
- Proficiently preprocessed and augmented medical imaging datasets to bolster model robustness, employing methods such as image normalization, noise reduction, and data augmentation to ensure high-quality input data.

Taiwan Open Education Development Unit

Taiwan (Hybrid)

Founder / Data Engineer

June 2021 - Present

- Led a team to successfully develop and launch the CourseAPI platform, streamlining course information and accessibility.
- Developed efficient data scraper tools, automating data collection and analysis processes.
- Conducted regular maintenance to ensure the CourseAPI platform's optimal performance and data accuracy.
- Conducted in-depth analysis of issues related to open educational resources and open source education.

DEVELOPMENT SKILLS

- Front-End Development: HTML, CSS, JavaScript, Bootstrap, Tailwind, React.js, Vue.js
- Back-End Development: Express.js, Django, Flask
- Software Development: Python, C, C++, Kotlin
- Data Analysis: R, MATLAB, SPSS, FSL, AFNI
- Databases: PostgreSQL, MongoDB, MariaDB
- Cloud Services: AWS, GCP, Microsoft Azure, OpenStack
- Operating Systems: Linux, Unix, Windows

SUMMARY

I am a high school freshman and results-driven professional with a passion for data science, advanced research, and technology development. Over the years, I have honed my skills and expertise through diverse experiences in research and technology leadership roles. My journey encompasses cutting-edge research in magnetic resonance imaging (MRI) data analysis, pioneering work in medical image analysis, and the development of innovative platforms for open education. I bring a robust skill set that spans data science, software development, and cloud infrastructure management, making me a versatile and dynamic contributor to any team or project. My commitment to staying at the forefront of emerging trends and technologies in fields such as neuroimaging, data engineering, and open education ensures that I am well-prepared to tackle complex challenges and drive innovation in the ever-evolving landscape of science and technology.

EDUCATION

Taipei Digital Experimental High School (T-School)

2023 - Present

Taipei, Taiwan (Hybrid)

- A public hybrid experimental education high school located in several places in Taipei, Taiwan.
- Integrates digital technology and inquiry-based learning, aiming to assist every student in achieving personalized deep learning.

New Taipei Municipal Yonghe Junior High School

2020 - 2023

New Taipei City, Taiwan

- Valedictorian of 53rd Graduates with Highest Achievements
- Class President of Gifted and Talented Science Program
- School President of Academic Year 2023

HONORS

- 2019 New Taipei City Elementary School Gifted and Talented Education Program Individual Research Joint Presentation || Excellence Award
- 2020 New Taipei City Science Fair || Excellence Award
- 2021 New Taipei City Science Fair || High Distinction Award || Representative Study for National Fair
- 62nd National Primary & High School Science Fair (NPHSSF) || Junior High School Group || 3rd Place
- 2022 Young Talent Intelligence Technology Camp || High Distinction Award

ADDITIONAL

Languages

• Mandarin, Taiwanese: Native

• English: TOEIC 800 (2019)

• Spanish: Intermediate

Voluntary Experience

- Lecturer of g0v Sch001 Open Source / Civic Tech Education Project
- Agenda Team of Hacks In Taiwan Conference (HITCON) || 2023
- Co-Founder and General Coordinator of Computer Informatics Students Conference (CISCON) || 2023
- Coordinator of Conference for Open Source Coders, Users, and Promoters (COSCUP) Open Education Track | 2023
- Conference Streaming of Conference for Open Source Coders, Users, and Promoters (COSCUP) || 2021
- Certified Senior Open Source Contributor (OSCVPass Program) of Open Culture Foundation
- Technical advisor of several open source projects and communities