GUAN-WEI LI

IT ENGINEER

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LANGUAGES

- Mandarin (Native)
- English (Proficient)

PROFESSIONAL SUMMARY

Guan-Wei Li is a dedicated and logically-minded developer with a strong adherence to the DRY (Don't Repeat Yourself) principle. His expertise spans multiple fields, including web development, blockchain technology, and bioinformatics. He is passionate about learning new knowledge and tackling interdisciplinary challenges, with significant experience in software development, data analysis, and system optimization.

WORK EXPERIENCE

2023/11 - 2024/07

Asunción, Paraguay

International Cooperation and Development Fund | Assistant Technician (Substitute Military Service)

- **Responsibilities:**
  - Resolve issues with HL7 FHIR database synchronization in HIS systems.
  - Develop and optimize APIs, increasing data retrieval efficiency by over 10 times.
  - Create user manuals and documentation to facilitate user onboarding and understanding.
  - Implement ELK stack for HIS system monitoring, detecting, and resolving issues efficiently.
  - Develop dashboards integrating with Telegram bot for real-time system status notifications.
  - Teach local employees to use the ELK system and deploy information effectively.
- **Skills:**
  - Java, Git, PostgreSQL

2022/07 - 2023/08

Banqiao, Taiwan

攻誠投創有限公司 (Advertising Company) | Web3 Developer

- **Responsibilities:**
  - Develop and maintain blockchain applications using Laravel and Python.
  - Design and implement user-friendly web interfaces ensuring optimal user experience.
  - Conduct API development and integration to enhance system functionalities.
- **Skills:**
  - PHP, MySQL, Python

2021/09 - 2023/07

2018/01 - 2021/07

Taipei, Taiwan

National Taiwan University | Research Assistant

- **Responsibilities:**
  - Conduct behavioral studies on zebrafish.
  - Utilize Python and OCTAVE for data analysis.
  - Utilized Python and Plink for data cleaning, normalization, and genome-wide association studies (GWAS).
- **Skills:**
  - Python, MATLAB, Bioinformatics

EDUCATION

2021/09 - 2023/07

National Taiwan University

Master's in Graduate Institute of Biomedical Electronics and Bioinformatics

Bioinformatics Research Experience

- **Objective:** Analyze SNP data from Taiwanese Atrial Fibrillation (AF) and Hypertension patients to identify potential biomarkers.
- **Methods:** Utilized Python and Plink for data cleaning, normalization, and genome-wide association studies (GWAS).

- **Results:** Identified significant differences in multiple SNPs among AF patient groups, providing crucial insights for further research.
- **Contributions:** Authored analysis reports, shared findings within the laboratory, and collaborated on the writing of research papers.

Publications:

- "Copy number variation of gasdermin D gene is associated with atrial fibrillation-related thromboembolic stroke" Europace, May 2023.

2017/09 - 2021/07

National Taiwan University
Bachelor's in Agricultural chemistry

COURSE

2022/10 - 2023/12
2023/04-2023/05

National Taiwan University
行政院院臺灣資安卓越中心計畫 - 臺大計中資安攻防課程
Participated in an information security series organized by NTU's Computing Center.

- **Course Details:**
  - Participated in NTU Computing Center's information security series.
  - Topics included white hat tools, offensive/defensive concepts, web basics, XSS, penetration testing (PT), and industry PT implementation.
  - Hands-on experience with defensive tools like Splunk and Fortigate, and key points of security reports.
  - The second semester included defensive tools and practical training, covering Splunk, Fortigate online practice, and key points of security reports.

- Learnings and Experiences:
  - Learned various security-related knowledge and techniques, including using white hat tools for attacks and defenses, mastering basic offensive and defensive concepts, and understanding the basic structure of attack targets.
  - Gained hands-on experience, delving into various technologies and methods in the field of information security.
  - Course design combined theory with practice, allowing application of learned knowledge in simulated environments, further enhancing security skills.
  - Provided content related to industry practices, including PT implementation concepts and practical exercises, beneficial for future information security work.

PROJECT

2023/11 - 2024/07

International Cooperation and Development Fund
HIS-ELK

- **Objective:** Implemented ELK stack for real-time monitoring of HIS systems.
- **Methods:**
  - Deployed and configured ELK stack (Elasticsearch, Logstash, Kibana) to monitor HIS systems.
  - Developed dashboards and integrated them with a Telegram bot for immediate notifications of issues.
  - Results:
  - Improved system monitoring and issue detection, reducing response time to system issues.
  - Enhanced the ability to analyze system performance and identify areas for optimization.

**International Cooperation and Development Fund
HL7 FHIR (Fast Healthcare Interoperability Resources) Electronic
Medical Record Information**

- **Objective:** Improve the sharing and application scenarios of electronic medical records using HL7 FHIR (Fast Healthcare Interoperability Resources).

- **Methods:**
  - Focused on the analysis and improvement of HL7 FHIR electronic medical records sharing and application scenarios using HAPI FHIR open-source software.
  - Rewrote the HIS version of HAPI FHIR to enhance system performance and reduce resource usage, maintaining core functionalities and enabling real-time data updates to avoid performance bottlenecks.

- **Responsibilities:**
  - Completed missing data tables and developed all necessary APIs to ensure the system's comprehensive operation and service provision.
  - Authored detailed user manuals and documentation to facilitate rapid onboarding and system understanding for hospitals and other users.

- **Results:**
  - Ensured system functionality and stability, laying a solid foundation for subsequent optimization and maintenance.
  - Improved the interoperability and usability of international medical information, promoting global medical information sharing and application, thus enhancing healthcare service efficiency.
  - Demonstrated skills in medical information system development, problem-solving, and technical documentation writing, establishing a strong foundation for future development in this field.

2021
NYCU Glocal Digital Service & Innovation Competition

- **Objective: Offer emergency response solutions for snake bites.**
- **Solution:**
  - **Developed a snake-focused outdoor safety knowledge Line bot including:**
    - Snake identification: Utilizing machine learning and image recognition technology to help users identify snake species.
    - Snake bite emergency response: Providing outdoor first aid guidelines for snake bites.
- **Methods:**
  - Utilized Line bot SDK and PyTorch to develop the snake identification system and outdoor safety knowledge platform.

SKILLS

- Programming Languages:
  - **Python:** Data analysis, web development, machine learning (Pandas, NumPy, Django, Matplotlib, Seaborn, Scikit-learn, PyTorch)
  - **Java:** Object-oriented programming, web development (Spring, Maven)
  - **PHP:** Web development with Laravel, RESTful API development
- Databases:
  - **MySQL, PostgreSQL**
- Tools:
  - **Git, Pytorch, ELK Stack**
- AI/ML Tools and Frameworks:
  - **TensorFlow, Keras, PyTorch**