Yu Chen Lin (Jean Lin)

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Education

M.S. in Computer Science and Engineering | *Columbus, OH* May 2026 (Expected)
The Ohio State University

M.S. in Aeronautics and Astronautics (Overall GPA: 3.95/4.3) | *Tainan, Taiwan* Aug. 2019
National Cheng Kung University

B.S. in Mechanical Engineering | *Chiayi, Taiwan* Aug. 2017
National Chung Cheng University

Technical Skills

- **Programming Languages**: C/C++, Python, Bash, Shell, Java, JavaScript, HTML/CSS, PowerShell
- **Software Technology**: Linux, Git, CMake, Visual Studio Code, Eclipse, Vim, Continous Integration/Deployment (CI/CD), GNU Debugger, Docker, Kubernetes (K8S), JSON, YAML, Jupyter Notebook, Google Test (GTest), OpenStreetMap (OSM)
- **Cloud Technology**: Heroku, Firebase, GitLab, Amazon Elastic Compute Cloud (AWS EC2)
- **Web Development**: Angular.js, React.js, Express.js, Node.js, RESTful API, MySQL, MongoDB
- **Software Development**: Software Development Life Cycle (SDLC), Object-Oriented Programming/Design, Multithreading Programming, Design Pattern, Unified Modeling Language (UML), Clean Code, Agile/Scrum, Maven, Data Validation and Visualization, Distributed Systems

Work Experience

Student Software Engineer | The James Ohio State Medical Center | *Columbus, OH* Aug. 2024 - Present

- Consolidate **AWS EC2** instances to the same server location, aiming to optimize performance by 30% and reduce operational costs by 25%
- Apply machine learning algorithms to detect lymphedema at its earliest stage with the expectation of increasing doctors' diagnostic accuracy by 10%
- Contribute to a non-invasive method for diagnosing lymphedema using Google Pixel watches and Artifical Intelligence

Software Engineer | GallopWave Inc. | *Taipei, Taiwan* Aug. 2021 - July 2024

- Boosted **road-level localization** accuracy from 84% to 99.9+% using the Map Matching Algorithm (K-Nearest Neighbor Search, Hidden Markov Model, Viterbi Algorithm) implemented in **C++ on Linux**
- Utilized Linux perf tool to identify, analyze, and address performance bottlenecks, reducing system and algorithmic time costs by 87+% through **multithreading techniques**
- Pioneered comprehensive unit tests with **GTest** for 4+ algorithm developments to ensure high-quality and reliable code
- Overhauled 5+ visualization toolkits using **Python** and statistical methods for algorithmic verification, dynamic testing, and performance analysis, reducing testing time by 25% and improving algorithmic accuracy by 15%
- Established GitLab-based **CI/CD pipelines (YAML, Bash/Shell Scripting, Python, Docker, K8S)** for automated testing and performance benchmarking; increased testing process efficiency by 95+% in a fast-paced development environment
- Enhanced C++ code quality by 20+% through refactoring with **Design Patterns**, **Clean Code Principle**, and **Object-Oriented Design and Programming**
- Increased **cross-functional collaboration efficiency** by 80+% through comprehensive documentation of 3+ map-related products and 5+ testing software tools

Software Engineer | ASM Pacific Technology Ltd. | *Taoyuan, Taiwan* June 2020 - Aug. 2021

- Increased efficiency of a legacy system by 33+% through solving race conditions using locks, condition variables, and POSIX threads
- Contributed to documentation of test cases and error-handling scenarios; reduced communication costs by 50%
- Collaborated cross-functionally with assembling engineers, process engineers, computer vision engineers, and software managers to provide solutions

Selective Projects

Portfolio Website Aug. 2024

- Developed an interactive portfolio website using **HTML**, **CSS**, and **JavaScript**, including dynamic typing animations to enhance user engagement and to showcase academic background, professional experience, and project highlights

Instagram Clone Aug. 2024

- Engineered 5+ full-stack features including real-time post updates, user authentication (signup and login) with JWT, and resource access control with authorization; deployed the website on the Firebase and Heroku
- Designed and implemented 3+ **RESTful API** endpoints using **Node.js** and **Express.js**
- Created a database for storing images and user data using **MongoDB**, **Mongoose**, and **CRUD** operations