

Chih-Ting (Justin) Yeh

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EDUCATION

Vanderbilt University

Master's, Computer Science

- GPA: 3.87/4.0

Nashville, Tennessee, USA

Aug. 2022 – May 2024

National Taiwan University

Bachelor's, Engineering Science and Ocean Engineering

Taipei, Taiwan

Sep. 2014 – Jun. 2018

TECHNICAL SKILLS

Programming: Python, Java, JavaScript, TypeScript, HTML, CSS, Swift

Frameworks: React, Next.js, Node.js, Express.js, Spring Boot, FastAPI, Django, SwiftUI, ARKit, RealityKit

Databases: PostgreSQL, MySQL, MongoDB, Redis

Developer Tools: Unix/Linux shell scripting, Docker, AWS, Git, Maven, Gradle, NPM, Webpack, Vite

CI/CD Tools: Docker, Jenkins, Gitub Action, Terraform

WORK EXPERIENCE

Software Engineering Intern

Institute for Software Integrated Systems, Vanderbilt University

Nashville, Tennessee, USA

May 2023 – Sep. 2024

- Developed a **Python**-based data visualization dashboard using **NextJs**, **Plotly/Dash**, **FastAPI**, **Redis**, and **PostgreSQL** to enable concurrent gameplay and display complex simulation game logs (1,500+ lines), clarifying action-observation sequences and network structures.
- Designed and implemented a **Linux**-based network emulation framework with **Mininet** and Cyber Operations Research Gym, facilitating realistic **reinforcement learning** agent testing through **object-oriented design** and decreasing end-to-end testing time **by 30%**.
- Engineered 4 continuous integration pipelines with **Jenkins**, **Docker**, **Nginx**, and **shell scripting**

Research Assistant

Research Center for IT Innovation, Academia Sinica

Taipei, Taiwan

July 2020 – Mar. 2022

- Developed fund **recommendation systems** with Python and LightFM, achieving a **150%** improvement in client purchase cases by expertly incorporating funds' metadata insights.
- Implemented a **PyTorch**-based **multi-task learning** framework to predict early blockbusters, resulted in a **20+%** performance improvement on two real-world datasets in different languages
- Conducted document expansions on large datasets on **Google Cloud Platform (GCP)**. Increased recall by **3.3%** on document retrieval by enriching text signals using **docTTTTTquery**

SELECTED PROJECTS

Cloud Resume Challenge | AWS, Terrafrom, GitHub Action

May 2024 - June 2024

- Achieved a serverless full-stack deployment by leveraging **AWS S3**, **Route53**, and **CloudFront CDN** for static website hosting, integrated **AWS Lambda** and **DynamoDB** for backend data management.
- Followed CI/CD practices with **Terraform** and **GitHub Action**, achieving seamless deployment.

Web-based Solitaire Game | React, NodeJS, MongoDB, Redis, AWS

Aug. 2023 - Dec. 2023

- Implemented robust server-side logic in **Node.js** with **MongoDB(NoSQL)** and **Redis**, including **user authentication**, game **state management**, and **REST API** endpoints for game actions
- Created a responsive front-end for Solitaire with **React**, **Styled Components**, achieving a responsive design.

iOS AR Network Visualization App | SwiftUI, RealityKit, ARKit

Feb. 2024 – April 2024

- Developed an iOS application using **Swift**, **SwiftUI**, **RealityKit**, and **ARKit** that visualizes network simulations
- Implemented an API backend using **FastAPI** and **PostgreSQL** to manage the state of network simulations

Java Spring Boot Movie Recommendation Systems | Java19, Spring Boot

Jan. 2023 – May 2023

- Developed microservices using **Spring Boot**, **Spring Data JPA**, **Spring Cloud Gateway**, and leverage the parallel reactive programming features of **RxJava**, improving performance by **20%**