# Mars Huang

🎓 BSc., Electrical and Computer Engineering, National Chiao Tung University 2015 - 2019

linkedin.com/in/mars-huang-72b9a825b
flying-musk.github.io
mars.hs.huang@gmail.com
+886 932 523 366

### Sr. Software Engineer, CTOne, Taipei Jun 2024 - Present

```
Frontend: React(TypeScript)/Single SPA/TanStack/React Hook Form/Zustand/Mantine/React Flow
Backend: Keycloak/PostgreSQL/NestJS/KrakenD/Go
Infrastructure & Automation: Docker/Nginx/GitHub Actions/Jenkins
```

- **Micro Frontend Architecture**: Developed a modular and independently deployable micro frontend architecture for our platform using Single SPA, React, and TypeScript.
- **Frontend State Management and Styling**: Implemented global state management using Zustand and utilized TanStack Table for dynamic data tables and TanStack Query for efficient data fetching. Integrated React Hook Form for form validation and error handling. Created an interactive Network Topology Chart using React Flow. Used Mantine material system, leveraging createStyles for fine-tuned styling.
- **API and Authentication Management**: Configured Nest.js endpoints to retrieve OAuth 2.0 JWT tokens from Keycloak, enabling secure API access. Connected Keycloak with PostgreSQL for persistent storage and set up KrakenD as an API gateway to enforce token-based access control. Developed a Go-based service to initialize user configurations in Keycloak, managing roles and access levels (e.g., full access, read-only).
- **Schema and API Management**: Used Hygen to generate Zod TypeScript schemas and managed API calls with Zodios hooks, leveraging Zod for schema validation.
- **Containerization and Deployment**: Configured Docker for key platform services, including Keycloak, PostgreSQL, and KrakenD, implementing Docker networks to streamline inter-service communication. Configured Nginx as a static file server and reverse proxy with SSL to securely route API requests for our frontend application.
- **Automation**: Utilized GitHub Actions and Jenkins to automate builds, Jest testing, and Docker registry pushes, enhancing CI/CD workflows. Used Husky for commit message linting to ensure consistent commit standards across the team.

### Frontend Engineer, Trend Micro, Taipei May 2023 - May 2024

```
React/Tailwind CSS/Dynamics 365
```

- Led the migration of a platform to a cloud-based structure, implementing a new UI design that enhanced UX and improved site performance, achieving an A-grade rating.
- Built the UI using React, Tailwind CSS, and Dynamics 365, scaling to handle 400K articles and serving 10M users in 29 languages.
- Integrated Solr Search, Azure, and Microsoft Power Automate to improve search functionality.
- Created project documentation to enhance version control practices, reducing communication time and boosting team efficiency.

### Frontend Engineer, Trend Micro, Taipei Jul 2020 - Apr 2022

```
Salesforce LWC/JavaScript
```

- Led the migration of a portal to a cloud-based structure, introducing a modern UI experience for users.
- Built scalable UI components for project use.

### Software Engineer, Arcadyan, Hsinchu Oct 2019 - Jul 2020

```
HTML/CSS/JavaScript/C/Makefile
```

- Built the UI service for our router firmware, maintaining an HTTP server using C.
- Created API endpoints for frontend use on the server, coordinating closely with embedded systems engineers to ensure the API behavior aligned with low-level firmware requirements on the development board.

# SIDE PROJECTS

## Personal site

- Crafted main layout including RWD and implemented day-night, back-to-top feature.
- Integrated GA4 and added meta description for better SEO.
- Improved site performance, achieved Google search engine 1st ranking.
- PageSpeed Insights score boosted from 83 to 100.

## DECK.GL

- Implemented a map showcasing National Parks and Bay Area Rapid Transit (BART) in the US using Deck.gl, React.js, and Tailwind CSS.
- Added a search functionality for National Parks and an interactive feature that hides railway lines when the map is zoomed out to a certain level.

## Ingenta

- A platform offering students tailored improvement plans and predictive insights on school admissions, helping them understand their chances and focus efforts.
- Developed drag-and-drop functionality for school rankings, progress bars for improvement tracking, and score distribution visualizations.
- Utilized a modern tech stack with Next.js for server-side rendering, D3.js for interactive visualizations, and Tailwind CSS for responsive UI design.

## Get Stock Info

- Developed a simple project to visualize current stock levels of produce.
- Built the frontend using React.js, TypeScript, and Chart.js, with backend services powered by Google Cloud Functions.

## Admin Web

- Created an admin control panel for management purposes using Vue 3, Tailwind CSS, and Element Plus.
- Implemented backend functionality using Google Cloud Functions.

# MISCELLANEOUS FLYING RELATED GAMES

Red Or Green - A simple memory game built with Vue.js, players should distinguish the item's first appearance.

Short Term Memory - An application for users to input card values and then memorize the combinations.

Mental Calculation - A straightforward application for users to practice mental calculations.