

Eric Tsai / 蔡堯力

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Summary

I enjoy making decisions based on reliable data. Additionally, I love breaking down assignments into clearer goals to complete tasks more efficiently. After four years data experience in finance and real estate, I shifted to front-end development to create impactful products for society.

Skills

Front-End Development

Library

- React
- Redux (RTK)
- TensorFlow.js
- Apache ECharts
- three.js
- NextAuth.js

Language

- TypeScript
- JavaScript (ES6+)

CSS

- Styled-Components
- Tailwind CSS

Framework

- Next.js (App Router)

Cloud Services

AWS

- Lambda
- Amplify
- SageMaker
- S3
- API Gateway

GCP

- Compute Engine
- Cloud Storage
- Firebase

Other

Language

- Python

Knowledge

- Machine learning
- Statistic

Work Experience

Front-End Engineer, AppWorks School

Mar. 2023 - Aug. 2023

Personal Project

- Built and launched the personal project independently in 5 weeks, combining AI technology with a user-friendly front-end interface. The leading technologies used in this project including TypeScript, Tailwind CSS, Next.js, and Amazon web services such as Lambda, Amplify, and API Gateway.
- Built a complete fashion website from scratch using React, based on the Figma design and API documentation.

Co-work

- Designed database schema with iOS engineers using Firestore and built the friend's mechanism with a simple UI.
- Collaborated with iOS and backend engineers to brainstorm and bring our ideas to life, such as campaign landing page, chatbot, and coupon.

Topic Discussion

- Shared knowledge about Event Delegation, Big O, and the concept of browser rendering with my learning partners.

Data Scientist, Taipei Fubon Commercial Bank

Nov. 2021 - Mar. 2023

- Assisted Momo, one of Taiwan's biggest e-commerce sites, built a recommendation system using two-tower model.
- Built the model to predict the best marketing time for each customer, helping the response rate of telemarketing to increase by 30%.
- Used Cash Flow data and fraud detection model to decrease 80% of manual tasks in finding watch-listed accounts.

Data Analyst, Yungching Real Estate Agency

Sep. 2019 - Sep. 2021

- Assisted the company to automatically push positive housing market news to customers by 永慶快搜APP and increased page views by 1200 per day on average.
- Built the image classifier using OpenCV, the package for computer vision, improving document review efficiency to decrease nearly 90% of manual tasks.
- Analyzed online user behavior and created a data processing pipeline to produce reports automatically.

Projects

Things AI Can Do [\[GitHub\]](#) [\[Website\]](#)

An interactive AI website that demonstrates the capabilities of AI and enables users to understand practical applications of AI through hands-on interactions.

- Used **three.js** in combination with facial recognition technology to create a 3D virtual avatar application.
- Implemented interactive features for website drawing using the **canvas API**.
- Created visually appealing pie charts using **Apache ECharts**.
- Utilized the **Next.js** web development framework for frontend rendering with **SSR (Server-Side Rendering)**.
- Improved productivity when developing complex applications using **TypeScript**.
- Improved readability and maintenance by dividing React components.
- Integrated **AWS Lambda**, **API Gateway**, and **ML services** to develop a **facial recognition API** for front-end usage.
- Wrote **unit tests** using **Jest**.
- Deployed the website using **AWS Amplify**.
- Built reusable UI components using **Tailwind CSS** and **Headless UI**.
- Implemented Google and GitHub login functionality using **NextAuth.js**.
- **Refactored** the project code to split the logic and UI apart.

Wordle [\[GitHub\]](#) [\[Website\]](#)

Recreated Wordle using **React**, **Redux**, **TypeScript**, and **Tailwind CSS**.

- Used **Redux Toolkit** and **useReducer** to write the complex logic.
- Split a complex problem into tiny steps.

STYLISH [\[GitHub\]](#) [\[Website\]](#)

A stylish e-commerce store with budget-friendly prices.

- Completed the entire website's UI based on the **Figma design**.
- Implemented **Fetch API** based on the API documentation.
- Designed and implemented the carousel and infinite scrolling features using **Vanilla JS**.
- Used **Git** to manage version control.
- Used **Firebase** to deploy the website.

National Smart Manufacturing Big Data Analytics Hackathon [\[GitHub\]](#)

Prediction of Film Thickness on Painted Surface of Workpiece.

- Implemented exploratory data analysis using statistical methods and visualized data to get more pattern insight.
- Utilized the stacking technique to combine the strengths of multiple models and achieve improved predictive results.
- Constructed a data pipeline to automate the process of data extraction, transformation, and loading (ETL), as well as model training.

Awards

2022 National Smart Manufacturing Big Data Analytics Hackathon - Enterprise Group Final Top 12

2021 Data Station Enterprise Data Hackathon - Enterprise Topic Champion of Perfect Corp.

Education

- Master of Arts In Economics - Aug. 2018 National Chengchi University - Taipei, Taiwan

Online Courses

- Meta Front-End Developer
- Getting started with AWS Machine Learning
- Deep Learning [\[GitHub\]](#)
- Data Visualization and Communication with Tableau [\[Tableau Public\]](#)