

Che-Yi (JOE) Wu

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EDUCATION

Northeastern University – Boston Campus, Boston, MA

09/2023 – Present

Master of Science in Computer Science, GPA 3.74/4.0

Expected Graduation: May 2026

Relevant Coursework: Distributed System, Object-Oriented Design, Cloud Computing, Machine Learning

Arizona State University – Tempe Campus, Tempe, AZ

08/2017 – 05/2022

BS in Marketing & Computer Information Systems, GPA 3.72/4.0

Relevant Coursework: Web Design and Development, Database Systems, Data Structures, Algorithm

WORK EXPERIENCE

Front-End Engineer (<https://www.preciser.io/>)

11/2021 – 01/ 2023

Preciser (HTML, CSS, JavaScript, Vue.js, Vuetify, Postman, Figma, AWS, GitHub Actions)

- Contributed to the development of a **distributed SaaS platform** for sports data analytics, improving data consistency and real-time updates across teams using **Vue.js** and **AWS** services.
- Refactored front-end components with **Vuetify** and implemented lazy loading, reducing initial load time by 28% and improving performance across devices.
- Integrated and tested **RESTful APIs** for live scores and user data using **Postman** and **JavaScript**; reduced front-end data issues by 45% with added validation and retry logic.
- Maintained **CI/CD pipelines** with GitHub Actions and **AWS CodeDeploy**, reducing deployment time by 50% and supporting faster iteration cycles.

SELECTED PROJECTS

Husky Bridge (React, TypeScript, redux, Express, MongoDB, REST APIs, Node.js, JWT)

01/2025 – 05/2025

- Developed a peer-to-peer student service exchange platform using **React 19** and **Redux Toolkit**, helping 1,000+ Northeastern students connect and reducing reliance on fragmented social media groups.
- Implemented **JWT-based authentication** and **role-based access control** in a **Node.js + Express.js** backend, improving account security and minimizing unauthorized access events.
- Used **MongoDB** with indexed queries to deliver real-time chat and item listing updates, achieving consistent <100ms response time for 95% of API calls.
- Automated testing and deployment with **Vite** and **GitHub Actions**, reducing manual build errors and improving release frequency by 30% during active development.

Sky Dash iOS Gaming App (Swift, UIKit, Firebase Authentication & Storage, Firestore)

09/2024 – 12/2024

- Developed **Sky Dash**, a side-scrolling endless runner game for iOS using **Swift** and **UIKit**, featuring animated characters, parallax-scrolling environments, and collision-based gameplay.
- Enabled secure registration and login with **Firebase Authentication**, supporting 100+ authenticated users with persistent session handling.
- Used **Cloud Firestore** and **Firebase Storage** to support in-app chat, friend requests, profile photo uploads, and editable user profiles.
- Synchronized real-time user data across devices using **Firebase** listeners, enabling dynamic leaderboard updates and live messaging with minimal latency.

Hybrid Models to Predict Stock Price (Python, PyTorch, sklear, pandas, arch, Matplotlib)

09/2024 – 12/2024

- Built hybrid **RNN-based forecasting models** (LSTM + GRU combined with ARIMA and GARCH) using PyTorch and scikit-learn to analyze and predict stock price movements across 7 tickers.
- Engineered financial-metric features and normalized multi-source data from stockanalysis.com, improving training stability and convergence time by ~25%.
- Evaluated model accuracy with **MSE**, **MAE**, **RMSE**, achieving up to **15% lower error** than baseline **ARIMA**; visualized predictive trends using **Matplotlib**.
- Delivered analytical insights comparing hybrid vs. single-model performance and provided recommendations for model selection based on error stability and market volatility patterns.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, Swift, TypeScript, JavaScript, HTML, CSS

Frameworks & Libraries: React.js, Vue.js, Node.js, Express.js, UIKit, Bootstrap, Vuetify, Gson, Maven, JWT, axios

DevOps & Tools: Git/GitHub, Docker, Jenkins, Ansible, Postman, Vite, GitHub Actions, Slack, Figma

Cloud & Platforms: AWS (EC2, S3, Lambda), Azure, Firebase (Auth, Firestore, Storage), Microservices Architecture

Databases: MongoDB, MySQL, PostgreSQL, Firebase Realtime DB, NoSQL, SQL

Machine Learning: PyTorch, TensorFlow, scikit-learn, Pandas, NumPy, Matplotlib