Joseph Chen

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Education

- **Case Western Reserve University** — Cleveland, Ohio
  Bachelor of Arts in Computer Science; GPA: 3.95 — *August 2020-Present*

Experience

- **Nemesis Automation** — https://nemesisautomation.io/
  Software Engineer — *January 2022 - July 2022*
  - **Core Application**: Increased yearly revenue from $100,000 to over $200,000 by shipping a rewrite of the core Electron application from JavaScript to Typescript/TypeORM/SQL in a team of three developers.
  - **New Features**: Boosted customer growth by 222% by leveraging customer feedback to spearhead in-demand features, such as supporting new trending marketplaces and making an all-in-one NFT/wallet manager for Ethereum, Solana, and NEAR.
  - **Web Reverse Engineering**: Developed core anti-bot bypasses for automatic NFT minting and sniping by reverse engineering Ethereum and Solana NFT marketplaces and minting websites using Charles Proxy and Chrome DevTools.
  - **Continuous Integration/Delivery**: Facilitated efficient code reuse in contracted collaborations amounting up to $150,000 by organizing the Lerna monorepo and implementing GitHub Actions CI/CD pipelines and Verdaccio private NPM registries.
  - **Saved Sentry Costs**: Reduced Sentry error tracking costs by more than 50% through introducing filters and error caching to prevent surges of the same error.
- **Parallaxis LLC** — Flushing, New York
  Part-Time Software Developer — *August 2020 - December 2021*
  - **Go CLI**: Developed a Go command line interface bot to send concurrent HTTP requests to purchase limited time, low stock shoes on YeezySupply and Footlocker.
  - **Web Reverse Engineering**: Discovered and implemented cache and anti-bot bypasses for the CLI by reverse engineering HTTPS requests and cookies using Charles Proxy and Insomnia.
  - **Continuous Delivery**: Improved developer productivity and eliminated over 80% of manual work by deploying a CI/CD pipeline with GitHub Actions and Linux to automatically ship a versioned build of the bot to users and Q&A.
  - **Captcha Solving Library**: Created a Go library for integrating four automatic captcha solving APIs to send HTTPS requests and RabbitMQ messages to bypass anti-bot protections on shoe retail websites.
  - **Automated mouse movements**: Invented a generative adversarial neural network to automatically generate mouse movements in Python/TensorFlow/Keras and deployed the model using Express and TensorFlow.

Projects

- **Chinese Translation App**
  https://github.com/jchen42703/chinese-translation-api
  - **Web Development**: Built a React/Python/FastAPI/PyTorch full-stack application for automatically translating Chinese to English using a transformer recurrent neural network (BERT) with a partner. Deployed with Docker, AWS EC2, and NGINX, and load tested with Locust.
  - **Deep Learning Research**: Optimized API response times by over 100% by researching and deploying a quantized version of the original model.
- **Lyne**
  https://github.com/jchen42703/waiting-line-app
  - **Application**: Led a team of six to build a full-stack web application for helping businesses and clinics manage lines of people using React, ChakraUI, NodeJS, Typescript, MongoDB, Express, Express, NGINX, and Digital Ocean.
  - **Leadership**: Onboarded members not familiar with the tech stack through group crash course lessons and pair programming sessions.