CHEN WEI

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Education

Brown University **Sep. 2022 – May 2024**
Master of Science in Computer Science GPA: 4.0 / 4.0
Relevant Courses: Computer System Security, Deep Learning, Computer Systems, Data Science, UI/UX, Blockchains, etc.

Brandeis University **Sep. 2019 – May 2022**
Bachelor of Science in Computer Science and Applied Mathematics (Magna cum Laude) GPA: 3.789 / 4.0
Relevant Courses: Operating Systems, Mobile Application Development, Natural Language Processing, Data Structure, etc.

Skills

Languages: Python, Java, C, C++, SQL, JavaScript, HTML, CSS, Shell, TypeScript, R, MATLAB, Go, Latex

Frameworks & Tools: Docker, Express, MongoDB, AWS, React, Git, GraphQL, Node.js, Websocket, RAG, LLM, Heroku, Wireshark, Linux, Bootstrap, Next.js, Spring, Nginx, Numpy, Scikit-learn, PyTorch, Tensorflow, Spark, BeautifulSoup, NLP, DL, Django, REST API, Hbase, Redis, Cursor, etc.

Work Experience

AMA Career **Apr. 2025 - Present**
Full Stack Engineer *Remote*
- Build a responsive customer support **chat bot** and contact page in **React**, integrating **Resend API** for real-time email delivery for ama interview website
- Implement a scalable **WebSocket system** with a global **React frontend provider** to manage connections, auto-update message queues, and expose action APIs, and a **FastAPI backend manager** to handle multi-client connect/disconnect/reconnect events with background listeners for long-running tasks
- **Streamline** data flow by implementing generic **(de)serialization** and integrating **Supabase** with automated mock data uploads for real-time storage and testing

Blyss **Jan. 2025 - Apr. 2025**
Full Stack Engineer *Remote*
- Redesigned a modular, multi-screen onboarding flow in React Native with integrated state management, mobile/email verification, and custom animations—standardizing UI and improving reusability and maintainability
- Built and optimized backend services using **Node.js** and **Express.js**, implementing server-side routing, DAOs, and **Twilio API**-based authentication for secure, seamless user access
- Engineered a real-time **chat messaging** feature from scratch with **Node.js/Express.js** REST APIs and **PostgreSQL**, optimizing message storage with indexed queries for high performance

GreenPlatter **Jun. 2024 - Mar. 2025**
Full Stack Engineer *Remote*
- Designed and developed a full-stack **LLM-based** recipe creation and information management feature, including a custom frontend stepper component with fully customized styles, and robust **REST API** endpoints
- Migrated recipe data from **AWS DynamoDB** to **PostgreSQL**, enabling advanced querying capabilities such as filtering by allergens, enhancing data retrieval efficiency and query flexibility
- Automated code quality enforcement by implementing **Git pre-hooks** to standardize formatting, integrate ESLint and Prettier, and ensure consistent end-of-line symbols (\n) across platforms
- Optimized backend workflows for RESTful API calls, ensuring efficient handling of data requests and adherence to modern API design standards

Goldman Sachs **Jun. 2023 - Aug. 2023**
Summer Analyst Intern *New York City, New York*
- Implemented quantitative models using **Slang** and assessed various types of risks for trading options leveraging **SecDB** and **SQL** analytics
- Developed model to mitigate risk from daily transactional outflows and performed sensitivity analysis on firm's models to validate and optimize the stress assumptions made by firm's businesses based on different market conditions

China Construction Industrial & Energy Engineering Group Co. **Jun. 2020 - Oct. 2020**
Software Engineer Intern *Nanjing, China*
- Designed and implemented an **MySQL** database system deployed on **Alibaba Cloud** for managing construction sales data uploaded from **WeaverOA**, serving a large-scale organization with 2,000+ personnel
- Optimized **MySQL queries** for read operations by implementing **indexing** and **caching** mechanisms for frequently accessed data, thereby reducing the overhead of establishing database connections
- Introduced **normalization** and **denormalization** to improve query performance and minimize data redundancy

Projects

Food Ordering App | *Java, SpringBoot, SpringCloud, React, Node.js, Redis*   **Jan. 2024**
- Developed a set of **microservices** system with food ordering and delivery functionalities, utilizing the **Java**, **SpringBoot**, and **SpringCloud** framework
- Integrated **Redis** for centralized log management by designing and developing a custom RedisAppender for Spring Boot, enabling efficient real-time storage and retrieval of application logs in Redis for enhanced debugging and monitoring.
- Utilized **Nginx** for request forwarding and **SSL certificate** configuration to ensure the performance and security of HTTP requests, adopted **RabbitMQ** to decouple data interaction, monitor, and ensure delivery order
- Deployed through **docker** containerization to achieve portability and rapid deployment, while also improving resource utilization efficiency, which lays the foundation for the future introduction of **DevOps** and **Kubernetes** (K8S)

Wayfare Weave | *MongoDB, Express, React, Node.js, RESTful API, TypeScript* | [github] [youtube] & [alive!]   **Nov. 2023**
- Architected a dining planning web application based on a **hypertext** system with **Node.js**, **Express** and **MongoDB**, supporting theme planning, commenting, mapping, calendar scheduling, and user authentication features
- Implemented a **RESTful API** to facilitate communication between frontend and backend systems, improving the efficiency and security of data exchange during **CRUD** operations
- Engineered **React hooks** and **lazy loading** to enhance the reusability of stateful logic and speed up the page loading

Youtube Teller (Video - Captioning) | *Transformer, Teacher forcing* | [github] & [devpost]   **Nov. 2022**
- Devised and executed a sophisticated **multimodal transformer model** that concisely summarizes YouTube videos into single sentences, incorporating elements from **CLIP Prefix** and **GPT-2** architectures
- Conducted training and evaluation of the model using the **Microsoft Research Video Description Corpus** and **YouTubeClips** datasets, achieving **BLEU** - 0.520, **CIDEr** - 0.584 , **METEOR** - 0.302 , and **ROUGE** - 0.647

Research Experience

Brandeis University Computer Vision Research Group | *PyTorch, Tensorflow, GAN*   **Jul. 2021 - Aug. 2022**
- Conducted **multi-modal** research in the domains of image and sound transformation by combining semantic features with **TensorFlow** and **PyTorch** frameworks
- Implemented a comprehensive sound-image **cGAN** model, featuring **decoder** and **encoder** components in the pretraining state to extract image features
- **Multithreaded web scraped** over 5,000 YouTube videos and Google images utilizing **Requests** and **Selenium**
- Architected data preprocessing and visualized training curves, generated samples, and features using **NumPy**, **Pandas**, **Matplotlib** and **Seaborn**

Teaching Experience

Brown University   **Sep. 2023 - May. 2024**
CS/DS Teaching Assistant   *Providence, RI*
- Brown University - Csci 2660: Computer Systems Security (Spring 2024)
- Data 1030: Hands-on Data Science (Fall 2023)

Brandeis University   **Sep. 2021 - May. 2022**
CS Teaching Assistant   *Waltham, MA*
- Cosi 131a: Operating Systems (Spring 2022)
- Cosi 153a: Mobile Application Development (Fall 2021)

Brandeis University   **Sep. 2021 - May. 2022**
Math Grader   *Waltham, MA*
- Math 10a: Calculus(Fall 2021/Spring 2022)