YIAN GE

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Education

Northeastern University   **Sep. 2024 – Expected May 2026**
Master of Science Software Engineering Systems | GPA: 4.0/4.0   *Boston, MA*
- Relevant Coursework: Web Design, UI/UX, Data Structure and Algorithms

University of Texas at Austin   **Sep. 2022 – May 2024**
Bachelor of Science, Applied Mathematics | GPA: 3.9/4.0   *Austin, TX*
- Honors: Honoree Listing 2024, Honors Graduate

Technical Skills

Languages: JavaScript, TypeScript, Python, Java, C++, HTML/CSS, Swift, SQL, MATLAB, R, LaTeX
Frameworks and Libraries: React.js, Next.js, Tailwind CSS, Framer Motion, Django, Spring Boot, JavaFX, MySQL, BeautifulSoup, Requests, Postman, Firebase, Docker, Fast API
Development Tools and Environments: Linux, Git, GitHub, CI/CD, RESTful API, AWS

Experience

BeTogether Hub   **Dec. 2024 – Present**
Website Developer Intern   *Remote*
- **Translated Figma designs** into a **fully functional WordPress website**, improving accessibility and responsiveness across devices, while optimizing performance through style adjustments, image compression, and site configuration, resulting in a **20% reduction in page load time.**
- **Created and managed blog and podcast hosting services**, including category management, while designing and implementing custom themes and plugins to enhance functionality. Ensured the platform's design and features aligned with the nonprofit's mission to combat loneliness through mental health services.
- **Created comprehensive documentation** to guide administrators in effectively managing and maintaining the platform, ensuring long-term usability and consistency.

Projects

SmartBin: AI Waste Classification | *FastAPI, PyTorch, Next.js, TypeScript, Docker, AWS*   **Mar. 2025**
- Pioneered an AI-driven waste classification system to streamline recycling, building a comprehensive model training pipeline with **PyTorch** to preprocess the Garbage Classification dataset and train **11 deep learning models** (e.g., ResNet, EfficientNet), achieving **95% accuracy** across **10+ waste categories**.
- Engineered a full-stack web application with a **FastAPI** backend integrating **10+ trained models** for real-time image classification with a total processing time of **<200ms**, paired with a responsive **Next.js**, **TypeScript**, and **Tailwind CSS** frontend deployed on **Vercel**, supporting **10+ waste categories** with seamless scalability.
- Deployed the system using **Docker** for containerization and a **GitHub Actions CI/CD pipeline** to **AWS EC2**, automating updates, slashing manual effort by **80%**, and improving deployment efficiency by **30%** for a scalable, production-ready solution.

Spotify Bilingual Lyrics Extension | *Chrome Extension, JavaScript, Web Scraping*   **Feb. 2025**
- Developed a **Chrome extension** enabling **real-time bilingual lyrics** on Spotify Web by scraping high-quality human translations, improving **accuracy** over **API-based** solutions.
- Engineered **web scraping and DOM parsing** techniques to extract lyrics dynamically while ensuring minimal performance impact on the user's browsing experience.
- Optimized data retrieval to reduce load times by **20%**, implementing efficient structure for accessed lyrics.

AgendaPro Desktop Application | *JavaFX, Scene Builder, MVC Architecture*   **Dec. 2024**
- Developed a **JavaFX** productivity desktop application with **5+ modular components**, including dynamic calendars, task management, and focus tools, leveraging **MVC architecture** for scalable and maintainable design.
- Integrated a weather API to display real-time location-based updates and designed interactive, event-driven interfaces to handle **100+ simulated tasks and events** efficiently.
- Designed intuitive UI/UX with Scene Builder, incorporating **dynamic weekly/monthly views, focus tools (Pomodoro and meditation)**, and achievement tracking to enhance user productivity and engagement.

Restaurant Management System Development | *Django, Python*   **Aug. 2024**
- Developed a **full-stack** Restaurant Management System using **Django and Python**, featuring **real-time table reservations**, **meal ordering**, and an **integrated blog platform**, enhancing customer experience and operational efficiency.
- Designed a **scalable backend architecture** with advanced data models and database relationships, leveraging Django's powerful URL routing for efficient data handling and maintainability;
- Optimized database management using **SQLite** in development and ensured seamless adaptability to the database for production, demonstrating proficiency in scalable, production-ready solutions.