KangHao Lin

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EDUCATION

University at Buffalo, SUNY   **2022 Jan - 2025 May**

Bachelor of Science, Computer Science
- **GPA:** 3.84
- **Coursework:** Data Structures & Algorithms, Web Development, Computer Networks, Machine Learning, Artificial Intelligence

EXPERIENCE

University at Buffalo

Project Manager – Coder-Focused Message Board (University at Buffalo – Software Engineering Project)
- Designed and developed a scalable coder-focused message board with robust public and private community features, ensuring secure and efficient performance
- Collaborated with cross-functional teams and led Agile sprints via Trello to deliver on-time, high-quality software solutions
- Developed advanced features including post ranking, private communities, and voting functionalities to enhance overall user engagement
- Engineered secure authentication mechanisms and optimized database performance to maintain system reliability and optimal functionality

PROJECTS

Anime Pilgrimage Mobile App – Full-Stack (Expo, React Native, Express, MongoDB)
- Created using Expo and React Native that connects anime storytelling with real world geographic locations
- Implemented React Native functional components and managed application state using React Hooks
- Integrated RESTful APIs to fetch and display anime pilgrimage location data from an Express.js + MongoDB backend
- Designed and structured backend data models to support efficient querying and future feature expansion

Movie Recommender System- Full-Stack (Python, PyTorch, Flask, React, TailwindCSS, Scikitlearn, MongoDB, Docker)
- Built a content-based movie recommendation system using cosine similarity to match user preference with similar films.
- Integrated TMDB API to dynamically fetch and render movie posters, enhancing the user search experience
- Preprocessed metadata, including genres, cast, and keywords, to compute feature vectors
- Implemented vectorization with TF-IDF and cosine similarity scoring to generate accurate recommendations
- Developed a front-end search interface backed by MongoDB for efficient querying across thousands of movie entries

Schedule-Sync- Full-Stack (React, PHP, MySQL)
- Empowered businesses with a client-centric scheduling platform, streamlining booking workflows
- Secured user data via token authentication with bcrypt password hashing and CSRF token validation
- Developed with React, PHP, MySQL, and deployed on Apache
- Prevented SQL injection using parameterized queries and optimized database performance with indexing

Personal Portfolio Website (Next.js, React, TailwindCSS, TypeScript)
- Implemented reusable and client-side optimized logic using React hooks and TypeScript.
- Designed responsive and aesthetic user interface with TailwindCSS and smooth transitions using custom animations.
- Utilized React Hooks (useEffect, useRef, useState) and TypeScript for efficient client-side rendering and reactivity.

TECHNICAL SKILLS

- **Languages**: Python, Java, C, Scala, JavaScript, HTML, CSS, React, TypeScript, PHP, English, Mandarin Chinese
- **Databases**: MySQL, MongoDB, phpMyAdmin
- **Frameworks/Libraries**: Flask, Pytorch, React, Pandas, Scikit learn, Numpy
- **Tools & Methodologies**: Digital Ocean, Docker, Apache, Nginx, IntelliJ IDEA, Visual Studio, Version control (Git), CI/CD, Software development methodologies, algorithms