

# KANGHAO LIN

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## EDUCATION

### University at Buffalo, SUNY

May 2025

*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

### Movie Recommender System using Cosine Similarity- Full-Stack Development

- Built a content-based movie recommendation system using cosine similarity to match user preferences with similar films.
- Preprocessed metadata, including genres, cast, and keywords, to compute feature vectors.
- Implemented vectorization with TF-IDF and cosine similarity scoring to generate recommendations.
- Implemented a search interface backed by MongoDB to deliver movie recommendations based on cosine similarity, enabling efficient querying across thousands of entries.

### Schedule-Sync- Back-End Development

- 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.
- Prevented SQL injection using parameterized queries and optimized database performance with indexing

### Dynamic Blog Platform- Full-Stack Development

- Engineered a responsive blog with RESTful API functionality and user authentication, deployed via Docker
- Enhanced security by implementing HTTPS encryption, input sanitization, and CSRF protection.
- Reduced latency by 30% through Nginx load balancing and Docker containerization.

## TECHNICAL SKILLS

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