

# Kevin Xiang Li

https://kevinx.li

Email: kevinx.li@outlook.com

Mobile: +1 734-510-0189

## EDUCATION

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- **University of Michigan** Ann Arbor, MI, U.S.A  
*B.S. in Computer Science, Minor in Linguistics; GPA: 3.87/4.0* 2020. 9 - 2024. 5
  - **Honors:** James B. Angell Scholar (5 consecutive terms of all A's), Class of 1935 Engineering Scholarship (\$2000 for the 2023-2024 academic year)
  - **Course Highlights:** Programming Languages, Compiler Construction, Intro to Operating Systems, Intro to Machine Learning, Intro to Natural Language Processing, Computer Vision, Computer Security, XR & Society

## RESEARCH

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- **Michigan Intelligent Programming Lab** University of Michigan, U.S.A  
*Researcher* 2022. 4 - 2023. 8
  - **Proposed a novel program synthesis algorithm:** The new algorithm lifts program interpretation from evaluating one program at a time to simultaneously evaluating all programs.
  - **Outperformed the previous state-of-the-art method:** Outperformed previous state-of-the-art web automation technique by 6x & solved 2.5x more benchmarks.
  - **Published at top conference POPL:** First-author research presented in London at the 51st ACM SIGPLAN Symposium on Principles of Programming Languages (POPL 2024).
  - **Invited to give a talk at MIT PLR:** As one of 9 distinguished papers, invited to give a talk at the 2024 MIT Programming Languages Review (MIT PLR 2024).

## PROJECTS

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- **Cantonese Dictionary Mobile App** Hong Kong Lexicography Limited  
*Mobile App Developer (Remote)* 2021. 10 - present
  - **Implemented cross-platform UI using Flutter:** Supports both iOS & Android, rated 4.7 stars on Play Store.
  - **Built custom search backend in Rust:** Supports Chinese character, English, Cantonese romanization input, with efficient indexing for over 50K entries.
  - **Optimized user experience with local & cloud databases:** On-device SQLite database for bookmarks & settings, AWS DynamoDB for analytics to improve service.
  - **Gained over 5K monthly active users:** Gained 10K+ installs on App Store & 6K+ installs on Play Store.
- **RenovAR Home Renovation App** Capstone Project  
*AR App Developer* 2024. 3 - 2024. 4
  - **Developed an AR home renovation app using Unity:** Leveraging Meta Quest 3's passthrough technology to seamlessly integrate virtual furniture into real space for intuitive visualization of interior design.
  - **Supported replacing real furniture with virtual ones:** By scanning the space, users can remove real furniture and place virtual ones to freely plan layouts.
  - **Renders real-time outdoor view:** Real outdoor view through windows can be seen in the AR environment, creating a sense of presence and enhancing spatial realism.
- **Operating System Components** EECS 482 Intro to Operating Systems  
*Kernel Developer* 2023. 10 - 2023. 11
  - **Implemented a memory manager in C++:** Supports anonymous and file-backed pages. Led a team of 3 to optimize access performance.
  - **Implemented a concurrent file server:** Efficiently handles multiple parallel user requests sent via sockets for creating, deleting, reading, and writing files.
  - **Implemented a thread library:** Supports mutexes and conditional variables, utilizing low-level Linux interrupts for thread switching.
  - **Developed testing infrastructure:** Combines unit tests & randomized tests to comprehensively cover edge cases, ensuring system stability.

## SKILLS

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**Programming Languages:** Rust, C++, C#, Python, Dart, Swift, TypeScript, JavaScript, Java  
**Technologies:** Flutter, DynamoDB, SQLite, Unreal, Unity, Git, Jira, Docker