

Xiang (Kevin) Li

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Education

University of Michigan, Ann Arbor, MI 2020 – May 2024 (Expected)

- Major: Computer Science, Minor: Linguistics
- GPA: 3.8/4.0
- Honors: James B. Angell Scholar (3 consecutive terms of all A's), Class of 1935 Engineering Scholarship (\$2000 for the 2023-2024 academic year)
- Course Highlights: Computer Vision, Computer Security, Programming Languages, Human Factors in Computer Systems, Automotive User Interfaces, Language and History, Sound Patterns

Experience

Researcher April 2022 – present

Michigan Intelligent Programming Lab, University of Michigan

- Transform WebRobot backend to utilize Finite Tree Automata and speed up execution by 10 times.
- Profile Rust code with flamegraph & pprof and optimize data structures and algorithms accordingly.
- Meet with professor and teammate to set weekly goals and manage paper submission deadline.

Researcher Oct 2021 – present

Future of Programming Lab, University of Michigan

- Improve if expressions & tuple completions in Hazel, a live programming environment with typed holes.
- Systemize polymorphism with type aliases, for all types, and type functions backed by De Bruijn index.
- Exercise peer programming with teammate to help navigate a large codebase with 246 branches.

Projects

Mobile App Developer Oct 2021 – present

Hong Kong Lexicography Limited, Remote Work

- Devised a parser in Rust to understand more than 10,000 dictionary entries in a custom format.
- Incorporated Google's ML Kit to support handwritten input of Chinese characters.
- Integrated native Text-to-speech capability to read aloud Cantonese phrases and sentences.
- Gained 1.5K installations on the iOS app store & 1.1K installations on the Android play store.

Computer Vision Engineer Nov 2022 – Dec 2022

EECS 442 Computer Vision, University of Michigan

- Constructed a diffusion model to augment Kanji fonts using PyTorch.
- Experimented with eigencharacter embeddings using principal component analysis.
- Designed a better augmentation method using radical decomposition and intersection over union.
- Generated 1,274 Kanji characters in editable vector format with clear strokes and balanced structures.

Automotive User Experience Designer Nov 2022 – Dec 2022

SI 311 Automotive User Interfaces, University of Michigan

- Designed cluster and center display screens to help drivers experiencing a flat tire.
- Formulated unified alerts and prioritized common choices to reduce cognitive load of stressed drivers.

Skills

Mobile App Development • Web Development • Functional Programming • OOP • UX/UI Design

Programming languages: Rust, C++, JavaScript, Java, TypeScript, Elm, Python, Dart, Swift, C#

Tools: Git, Figma, Photoshop, Illustrator, Google & Microsoft Suites

Languages: bilingual in English and Mandarin, proficient in Cantonese