LIYU XIAO

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Education

McMaster University — **Expected May 2028**
(B.A.Sc.) in Computer Science — *Hamilton, ON*

Experience

Qoherent — **May 2025 – Aug 2025**
Software Engineering Intern — *Toronto, Canada*
- Created a **Gitea Actions CI** workflow to automate environment setup, GPU checks, builds, and artifact uploads.
- Processed **2,700** recordings into an **HDF5** dataset via a **Python** pipeline, reducing generation time by **99.33**%.
- Trained a modulation classification model in **PyTorch**, achieving **85**% accuracy.
- Built an "Upload Artifacts" feature to automate artifact uploads, LFS tracking, and streamline commit operations.

Yíká — **Mar 2025 – May 2025**
Product Design Intern — *Remote*
- Created UI/UX designs in **Figma** for both Shopper and Merchant dashboards, defining user flows and style guides.
- Developed a **Next.js** admin dashboard, Orders, Reports, Reviews, and Setting for streamlined management.
- Collaborated with the design team to refine dashboard UIs in **Figma** based on feedback and usability testing.

Upper Markham Learning Centre — **July 2024 – Sep. 2024**
Python Instructor — *Markham, Canada*
- Created personalized lesson plans for **30+ students**, increasing enrollment by **90%** within 2 months.
- Taught **25+ students** recursion, stacks, queues, and greedy algorithms.
- Guided students in building games like Baccarat and Blackjack, contributing to over **30 projects**.

Kumon Canada — **Oct. 2021 – April 2024**
Math/Reading Tutor — *Markham, Canada*
- Taught **1,000+ students** math, helping them achieve proficiency **6 months ahead** of their grade level.
- Organized and maintained **300+ student folders** per shift to ensure accurate records.

Projects

TutorMatch | *React, PHP, MySQL, Google APIs*
- Deployed a fully functional platform currently used by **10+ active users**, facilitating real tutor-tutee matches.
- Developed the backend using **PHP** and **MySQL**, handling user authentication, and data synchronization.
- Integrated **Gmail API** and **Google Calendar API** for email communication and real-time session scheduling.
- Created multiple interactive pages with **React.js**, including inbox, profile, and scheduling modals.

Date Planner | *GoogleMaps API, OpenAI API, Flask, Next.js, Tailwind CSS*
- Developed a personalized date-planning tool using **Next.js** and **Tailwind CSS** featuring a responsive design and UI.
- Integrated the **OpenAI API** to generate personalized date plans based on user preferences like budget and location.
- Built a **Flask** backend to manage API requests and used the **Google Maps API** for location-based recommendations.
- Designed horizontal scrolling cards using **Tailwind CSS** to ensure a smooth and responsive user experience.

Exercise Assistant Planner | *React, Flask, Gemini API*
- Developed an injury exercise planner using the **Gemini API** to generate tailored 7-day recovery plans.
- Built the frontend using **React**, leveraging **useState** for state management.
- Integrated the **Fetch API** to communicate with the backend for workout plans.
- Leveraged **Flask RESTful APIs** with **Flask-CORS** for communication and **JSON** for data exchange.

Rhythm-Based Platform Runner | *Greenfoot, Java*
- Implemented collision detection and smooth player mechanics for a rhythm-based platformer.
- Created maps with a modular obstacle system, ensuring varied challenges while minimizing redundancy.

Technical Skills

Languages FrameWorks: Python, Java, JavaScript, C, C#, PHP, SQL; React.js, Next.js, Flask
Tools & DevOps:Git, Git LFS, Gitea Actions, Webpack, Linux, XAMPP, Google Cloud, OpenAI API
Data & Databases: NumPy, h5py, PyTorch; MongoDB, SQLite, MySQL