Xuanyi Lyu

E-mail: xuanyi.lyu@mail.utoronto.ca

UNIVERSITY OF TORONTO

EDUCATION

University of Toronto   Toronto, Canada

*Bachelor of Science in **Computer Science & Statistics** Double Major, **Economics** Minor*   2022/09 - 2026/09 (Expecting)

Honor: Dean's List Scholar for the 2022-2025 academic years

Core Courses: Software Design, Data Structures and Analysis, Computer Organization, Systems Programming, UX/HCI, Databases, Probability, Statistics and Data Analysis, Web Programming, Operating Systems, Artificial Intelligence

ENTREPRENEURSHIP

Commercial Minecraft Role-Playing Game Server | *Founder & Operator*   2016/10 - Present

- Developed and operated an original RPG server, attracting **10,000+** players by continuously engaging them with PvP battles and boss challenges; achieved 100+ ongoing player involvement through in-game purchases, subscriptions, and personalized merchandise.
- Established a vibrant community of **100+** active players, enhancing satisfaction and retention through feedback from QQ groups, in-game mail, group polls, and surveys.
- Designed thematic maps, weapon models, and storylines, and created **8,000+** words of script.
- Expanded the user base by increasing server visibility through social media (QQ, WeChat), online advertising, and Minecraft community forums (MCBBS), attracting an average of 20+ new players daily.

PROJECT

UX/HCI-Driven Financial Management Application Design | *Team Leader*   2024/09 - 2024/12

- Conducted in-depth formative research using interviews (8 participants), questionnaires (70 respondents), and natural observation to identify pain points in financial management for university students; Synthesized findings into personas, experience maps, and job stories, driving strategic design decisions aligned with user needs.
- Designed and evaluated low-fidelity prototypes using think-aloud protocols and heuristic evaluation. Insights led to a **32%** increase in task success rates and significantly improved the user experience.
- Developed a high-fidelity interactive prototype in Figma, refining interface design and interaction flow through iterative testing to ensure seamless user experience and alignment with feedback gathered.
- Directed usability testing with target users, combining quantitative metrics and qualitative analysis. Results showed a **95%** satisfaction rate and a **47%** reduction in task completion time for core functions.

Statistics and Data Analysis of NBA Player Performance | *Team Leader*   2024/09 - 2024/12

- Designed and executed a research project to evaluate the impact of key performance metrics on NBA players' average points per game using a dataset of 1,400+ player records.
- Built and refined a multiple linear regression model using R, conducting residual analysis, diagnostic tests and implementing transformations to address violations of regression assumptions.
- Interpreted model coefficients to derive insights and authored a formal report and poster identifying significant predictors, such as field goal and free throw attempts, with data-driven strategies to improve player performance.

MIPS Assembly Language Tetris Game | *Independent Developer*   2024/02 - 2024/05

- Developed from scratch, implementing core mechanics such as block generation, movement, rotation, collision detection, and game-over logic.
- Designed a dynamic, pixel-based UI using Bitmap Display, enabling seamless real-time updates. Integrated keyboard input handling for intuitive player control of block movements and rotations, ensuring a interactive gaming experience.

Java-based Todo List Application for Task and Deadline Management | *Team Leader*   2023/09 - 2024/01

- Implemented "Clean Architecture" for object-oriented design, achieving high modularity and scalability.
- Utilized design patterns (Builder, Observer, Strategy) to enhance code reusability and minimize dependencies.
- Achieved **100%** test coverage by conducting unit, interface, and integration testing with JUnit 5.
- Integrated third-party APIs (Todoist API) to enable cloud synchronization for task and deadline management.
- Streamlined development processes and team collaboration by utilizing GitHub for version control, project tracking, and detailed git logs.

PERSONAL EXPERIENCE

Staff, Information Solutions Dept., **University of Toronto Chinese Club**   2024/09 - Present

- Developed and maintained the club website, enhancing user experience and ensuring timely event announcements.

Contestant, **Euclid Mathematics Contest**, Excellence Award (Top 25%)   2022/04

Contestant, **USA Computing Olympiad (USACO)**, Gold Division (Ranked 1/3676)   2022/01

Contestant, **Purple Comet Math Meet**, Team First Place (Ranked 1/3353)   2021/04

Volunteer, 100+ hours at the Community Library, Local Fire Station, and Blood Donation Center   2021/09 - Present

SKILLS & MISC.

Languages: Java, R, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, Assembly language

Technologies: Git, Linux, Microsoft Office, Figma, Canva, Photoshop