QIXUAN CHU

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EDUCATION

University of Toronto ***Sept. 2022 - Apr. 2027***

Honours Bachelor of Science, Specialist in Computer Science, Minor in Mathematics *CGPA: 3.91/4.00*

Awards: Dean's List Scholar (2023, 2024); Arts & Science Internship Program (Co-op)

Selected coursework: Machine Learning (A), Data Visualization (A+), Interactive Media (A+), Computer Graphics (A+), Operating Systems (A), Databases (A-), Algorithm Design, Systems Programming (A), Statistical Theory (A)

TECHNICAL SKILLS

Languages: Python, Java, C/C++, SQL, R, Bash, JavaScript, HTML/CSS, MIPS

Tools and platforms: Git, GitHub, Selenium/browser automation, SQL Server, Azure Data Factory, Power BI, Tableau, TouchDesigner, VS Code, PyCharm, IntelliJ, WebStorm, Linux/shell

Areas: applied AI/ML, machine learning, model evaluation, data engineering, backend/data systems, QA automation, data visualization, HCI/interactive media

RESEARCH AND EXPERIENCE

Software Engineer in Test Intern, RIM Core - Veeva Systems, Toronto, ON ***Jul. 2025 - Jun. 2026***

- Updated and debugged end-to-end automation for Vault RIM Core workflows, improving regression reliability by reducing flaky failures.
- Wrote automation scripts, test plans, and test cases for feature and development stories using maintainable Java, SQL, HTTP, and browser-automation test logic.
- Triaged automation and UT/Pre-UT failures by isolating likely causes in application behavior, rendered text/UI automation, data state, and cleanup steps.

Research Manuscript Collaboration - Offline RL for Adaptive Music Visualization ***Winter 2026***

- Drafted and revised introduction, background, and discussion sections for a manuscript on offline reinforcement learning for adaptive music visualization.
- Synthesized literature across art therapy, cross-modal mapping, affective computing, and offline RL to sharpen research motivation.
- Helped frame a multimodal pipeline using FER, EEG, and PPG signals with conservative offline RL methods including BCQ, IQL, and CQL.

Research Assistant - University of Nottingham Ningbo China ***Dec. 2024 - Apr. 2025***

- Researched AI-driven art therapy and adaptive therapeutic media, focusing on personalized music and visual interventions informed by physiological signals.
- Extracted and analyzed music, visual, and physiological features to identify dimensions relevant to therapeutic adaptation.
- Supported development and refinement of machine learning pipelines for adaptive therapeutic content generation.

SELECTED PROJECTS

Food Item Classifier | Python, model comparison, feature engineering ***Jan. 2025 - Mar. 2025***

- Built a classifier to predict food items from student responses and compared decision trees, KNN, and neural networks to improve generalization on unseen data.
- Applied feature engineering and structured model comparison to analyze overfitting, test-set performance, and model tradeoffs.

Box Office vs Streaming Services Visualization | D3.js, JavaScript, HTML/CSS ***Jan. 2025 - Mar. 2025***

- Developed interactive web visualizations analyzing box-office and streaming-service trends through coordinated D3.js views.
- Implemented interaction patterns for visual comparison and exploratory analysis across multiple entertainment data trends.

Synesthetic Music Visualization | TouchDesigner, audio features, affective computing ***May 2024 - Dec. 2024***

- Built a music visualization system mapping audio features such as amplitude and roughness to visual deformation for emotional-regulation exploration.
- Conducted and analyzed two user studies comparing soft and intense visual conditions using PSS-10, PANAS, and aesthetic-pleasure measures.