

Arist Xu

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SKILLS

Languages: Python, JavaScript/TypeScript, Java, C/C++, SQL, C, Racket, Bash, Octave, R, HTML/CSS.

Technologies: AWS, pandas, NumPy, React, GitHub, Bitbucket, Docker, Jupyter Notebook, Firebase.

Interests: Machine Learning (Certificates on Coursera), Soccer, Weightlifting, Rock Climbing, Martial Arts.

EDUCATION

University of Waterloo

Sep 2020 – May 2025

Bachelor of Computer Science, Honours with Specialization in Business

Waterloo, ON

- 89.52% Cumulative GPA, President of UWCSA, First Place in BDO New Venture Competition.
- Courses: OOP, Database Management, Algorithms, Data Structures, OS, Computation, HCI.

WORK EXPERIENCE

ODAIA Intelligence Inc. — Full Stack Developer

Jan 2023 – Apr 2023

AWS, Python (pandas, pytest), SQL

Toronto, ON

- Developed an automated health check system for a machine learning data pipeline that computes and validates key metrics, eliminating manual QA tasks and saving up to **4 hours per project execution**.
- Centralized pipeline health metrics in AWS S3 and communicated real-time updates by creating an interactive Slack App with AWS Lambda functions, **increasing project testing speed by 400%**.
- Optimized SQL queries and refined NumPy data types, resulting in up to a **300% increase** in data processing efficiency and a **95% reduction** in memory usage.
- Improved speed of data pipeline steps by up to **tenfold** by migrating imported R libraries to Python.

Sony Interactive Entertainment — Software Developer

Jan 2022 – Apr 2022

JavaScript, Python (pytest)

Waterloo, ON

- Resolved critical visual defects by rewriting component rendering logic in response to event changes.
- Ensured the functionality and stability of features by writing and executing tests for **3 new visual changes**.
- Improved marketplace recommendations by adding key properties to the store search payload for analytical processing, resulting in more relevant of search results.

Dataraction Inc. — Software Developer

May 2021 – Aug 2021

JavaScript (Next.js, React), Material UI

Toronto, ON

- Generated actionable insights by transforming backend data into readable charts on an analytics dashboard, empowering users to monitor engagement and demographic data across user groups.
- Revitalized the platform's video streaming services by incorporating global state with Redux and reconstructing key components, resulting in heightened responsiveness and functionality.

PROJECTS

Chrome-GPT

TypeScript (React), Tailwind, Python (Flask)

- Developed a Chrome extension that enhances Chat-GPT's contextual understanding by injecting relevant information from the current webpage based on vector embedding similarity.

UW Canadian Children's Books Center

TypeScript (React), Firebase

- Created a frontend carousel with responsive design principles for a book and magazine review platform.
- Enforced security measures by revoking expired Firebase keys on login to block unauthorized users.