

Xichen Pan

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Education

University of Alberta

Honours Bachelor of Science in Computing Science, GPA 3.79/4.00

2018/09 – 2023/06 (Expected)

Edmonton, Canada

- Teaching Assistant for CMPUT 301 Intro. to Software Engineering (Winter 2023)
- Undergraduate Scholarship (2019, 2020); First Class Standing (Winter 2019, Winter 2020, Winter 2021)

Professional Experience

Hyperledger, The Linux Foundation

2022/06 – 2022/11

Software Development Intern (Open Source)

Remote

- Developed web application in collaboration with Hyperledger Cello team to manage Hyperledger Fabric networks.
- Built backend APIs for node and channel's lifecycle operations in blockchains using Django.
- Utilized React.js, Ant Design and UmiJS to develop the user interface.

Department of Mathematical Sciences, University of Alberta

2022/05 – 2022/08

Undergraduate Research Assistant

Edmonton, Canada

- Designed, built and implemented a visualization tool to solve illumination problems using Java.
- Depicted and constructed scientific trigonometric graphing calculator to support unlimited decimal precision at processing speeds 20 times faster than currently available calculator tools.

Willowglen Systems

2021/09 – 2022/04

Software Developer (Co-op)

Edmonton, Canada

- Diligently maintained SCADA system known as SCADACOM used for managing subway operations.
- Enhanced the commit process and streamlined the speed of NoSQL databases by 10 times.
- Configured and continuously improved high concurrency and distributed services to enable increased data processing through data management techniques.

The Software Maintenance & Reuse Lab, University of Alberta

2021/05 – 2021/09

Undergraduate Research Assistant

Edmonton, Canada

- Conducted in-depth research on test migration under the supervision of Dr. Sarah Nadi and Dr. Ajay Kumar Jha.
- Implemented automatic test coverage measurement in a test migration tool, and facilitated migration benchmarking.
- Browsed and collected suitable Java projects for dataset and subsequently applied them to test coverage experiments, ensuring tests met set standards.

Intricate Group

2021/01 – 2021/04

Junior Software Developer (Co-op)

Edmonton, Canada

- Developed a utility management system and wrote tests for database transactions to ensure reliability.
- Built oil and gas report forms for the website's user interface using JSP, jQuery and JavaScript.
- Utilized Spring to implement web service and PostgreSQL to manage data while applying MVC architecture.

CANOSP, AdoptOpenJDK

2021/01 – 2021/04

AdoptOpenJDK Developer (Open Source)

Edmonton, Canada

- Maintained and oversaw performance of shell scripts for running OpenJDK tests, ensuring the project's testability.
- Supported change-based auto-test workflow and implemented GitHub CI for specific tests triggered by commits.
- Investigated and recovered usage of test coverage tool Jcov for AdoptOpenJDK project to achieve high test coverage.

Project Experience

FDCNN 2.0 [Python, PyTorch, XAI & Deep Learning]

2022/09 – 2022/12

- Implemented a new method to improve Feature-Guided CNN for MRI denoising and registration using Explainable AI loss.

PyMigBenchWeb [Python, Django, JavaScript, React, Git & PostgreSQL]

2022/09 – 2022/12

- Developed website enabling querying, dataset visualization and benchmarking based on Python library migration research.

i-Connect [Python, Django, JavaScript, React & Git]

2021/09 – 2021/12

- Developed social media application to allow users to create and engage with posts through likes, follows and shares; connected service and data to 3 external groups and applied agile practices to fulfill the development process.

Skills

- **Programming Languages** | Java, C, C++, Python, JavaScript, HTML, CSS, JSP, Lisp & Golang
- **Frameworks** | React.js, Express.js, Django, Node.js, UmiJS & Gin
- **Tools & Libraries** | Git, Bash, LaTeX, OpenCV, NumPy, PyTorch, Docker, SQLite, jQuery, MongoDB, Firebase & PostgreSQL