

Xichen Pan

(647) 994-4301 | github.com/xichen1 | xichen.pan@gmail.com

Education

University of Alberta	2018/09 – 2023/06
First-Class Honors Bachelor of Science in Computing Science, GPA 3.80/4.00	Edmonton, Canada
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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, and refined the user manual.	

Department of Mathematical Sciences, University of Alberta	2022/05 – 2022/08
Undergraduate Research Assistant	Edmonton, Canada
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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
<ul style="list-style-type: none">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.	

AdoptOpenJDK, CANOSP	2021/01 – 2021/04
AdoptOpenJDK Developer (Open Source)	Edmonton, Canada
<ul style="list-style-type: none">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

Stochastic Bayesian Refinement Network [Python, PyTorch, Object Segmentation & Deep Learning]	2022/12 – 2023/04
<ul style="list-style-type: none">Co-authored a research paper focused on moving object detection in videos using deep learning techniques. Implemented a novel Bayesian refinement network, improving the precision of object detection. Devised and executed an ablation study to evaluate the contributions of model components, affirming the robustness of the proposed approach. Paper is currently on arXiv:2304.09949.	
Feature-Guided CNN 2.0 [Python, PyTorch, XAI & Deep Learning]	2022/09 – 2022/12
<ul style="list-style-type: none">Implemented a new method to improve Feature-Guided CNN for MRI denoising and registration using Explainable AI loss.	
i-Connect [Python, Django, JavaScript, React & Git]	2021/09 – 2021/12
<ul style="list-style-type: none">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, TypeScript HTML, CSS, JSP, Lisp & Golang
- Frameworks** | React.js, Express.js, NestJS, Django, Node.js, UmiJS & Gin
- Tools & Libraries** | Git, Bash, LaTeX, OpenCV, NumPy, PyTorch, Docker, jQuery, MongoDB, Firebase, SQLite & PostgreSQL