

Xiao Wang

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SUMMARY

Seasoned Software Engineer with a robust 4-year background in software development, specializing in full-stack web development. Proficient in crafting AI-powered applications tailored for the manufacturing sector. Proven track record of academic research excellence and innovative side projects. Actively seeking opportunities that foster professional growth, embrace innovation, and present dynamic challenges. Deeply passionate about staying abreast of technological advancements, with a current focus on expanding expertise in mobile application development.

PROFESSIONAL EXPERIENCE

Research Software Engineer @ Quartic.ai Inc. | Permanent Full-time

May 2021 – Mar 2024 | Toronto, Canada

- Delivered 8+ major internal R&D and client AI-driven products tailored for the manufacturing industry.
- Led frontend development planning. Owned frontend tasks throughout the full software development life cycle, including requirement gathering, design reviews, design development, final integration with backend, testing, maintenance of new features and capabilities. (React, React-Router, Redux, Bootstrap, MaterialUI, AntDesign)
- Contributed to backend tasks using Django. Operated within an agile environment, collaborating closely with cross-functional teams and actively participated in code reviews to maintain high code quality.
- Researched autonomous control strategies for bioreactors, optimizing both batch and continuous manufacturing processes and presented them to the internal team.
- Explored decentralized application development on the Solana blockchain, culminating in the creation of a gambling application on Solana Devnet using Web3.js. This included integration with Wallet-adapters like Phantom for customized token transactions and swaps.

Lead Software Engineer @ Infinity Vision Consulting Inc. | Permanent Part-time

Nov 2020 – Present | Markham, Canada

- Oversee the development and maintenance of web applications for small to mid-sized businesses, enhancing their digital presence. Collaborate with cross-functional teams for business development, requirement analysis, UI/UX design, and project management. <https://www.infinityvc.ca/case-studies/>
- Lead front-end development using React and Next.js, ensuring high performance, responsive design, and optimal user experience. Spearhead back-end development with Django, focusing on robust, scalable, and secure server-side logic. Successfully deployed multiple web applications on platforms like Heroku and Vercel, achieving seamless hosting, enhanced scalability, and improved load times.
- Cultivated and maintained strong client relationships, emphasizing quality delivery, ongoing refinement, and adaptability to varied business requirements.

Research And Development Intern @ Omics Data Automation Inc. | Internship

Jan 2020 – Oct 2020 | Portland, USA

- Implemented deep learning techniques for analyzing histopathology images of lung cancer, focusing on cancer type classification and gene mutation status prediction.
- Preprocessed 500+ digital pathology slides using OpenCV; enhanced model accuracy using GoogLeNet-Inception V3 CNN with transfer learning, achieving an AUC increase from <0.5 to 0.74.
- Utilized and adapted InceptionResNetV2 pre-trained models from Keras; wrote Python scripts to facilitate transfer learning processes.

Research And Development Intern @ Ontario Institute for Cancer Research | Internship*Sep 2017 – Apr 2018 | Toronto, Canada*

- Engineered data analysis pipelines to investigate gene regulatory networks of long non-coding RNAs (lncRNAs) across multiple cancer types using RNA-Seq datasets from PCAWG and TCGA databases.
- Leveraged statistical techniques to identify target genes correlated with lncRNA presence in tumor types.
- Utilized R's RobustRankAggreg package for rank aggregation to pinpoint consistent target genes across various tumors. Executed pathway enrichment analysis via gProfileR package in R, visualizing results through enrichment maps in Cytoscape for clearer data interpretation.

Research And Development Intern @ University of Toronto | Internship*May 2017 – Aug 2017 | Toronto, Canada*

- Analyzed the quantitative traits for selection in intrinsically disordered proteins/regions (IDP/IDR) with phylogenetic comparative method and computational simulations.
- Developed and implemented Python scripts to extract protein sequences from the Ensembl database via RESTful API, streamlining data acquisition for research.
- Utilized MUSCLE for multi-species sequence alignment, enhancing the precision of phylogenetic comparative analysis. Integrated DISOPRED3 to obtain coordinates for predicted disordered regions, ensuring accurate protein trait analysis. Employed Jalview for the visualization of sequence alignments, improving data representation and interpretability.

Graduate Teaching Assistant @ Oregon Health & Science University | Contract*Mar 2020 – Jun 2020 | Portland, USA*

- Assisted in the instruction of CS/EE 559/659 Machine Learning course.
- Facilitated student understanding of machine learning concepts, algorithms, and implementation techniques.
- Supported course logistics, grading, and student queries to enhance the overall learning experience.

EDUCATION**Master of Science in Bioinformatics and Computational Biomedicine** | Sep 2018 – Jun 2020**Oregon Health & Science University**, Portland, USA**Honors Bachelor of Science in Bioinformatics and Computational Biology** | Sep 2014 – Jun 2018**University of Toronto**, Toronto, Canada**SKILLS**

Languages: JavaScript, HTML, CSS, Python, R, TypeScript, Java, C

Frameworks/Libraries: React, Next.js, React-Router, Django, Gatsby, Redux, PyTorch, TensorFlow, OpenCV

CSS Frameworks: Bootstrap, MaterialUI, AntDesign

Testing: Jest, Storybook, Enzyme, Playwright

Databases: PostgreSQL, SQL Server, NonSQL

Other Tooling: webpack, Yarn, ESLint, NumPy, pandas

PUBLICATION

- [Yi Hu, Zhaozhen Wu, Haitao Tao, Sujie Zhang, Xiao Wang, et al. Efficacy and safety of anti-PD-1-based therapy in combination with PARP inhibitors for patients with advanced solid tumors in a real-world setting. *Cancer Immunol Immunother.* 2021 Oct;70\(10\):2](#)