Nicolas **Zheng**

SOFTWARE ENGINEER · UBC COMPUTER ENGINEERING

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Summary

Excellent communicator interested in devising a better problem-solving method for challenging tasks, and learning new technologies and tools.

Languages: Python, Javascript, C, C++, Java, HTML, CSS, SQL

Tools and Frameworks: Git, React, NextJs, Bootstrap, MongoDB, MySQL, Pytorch, Tensorflow, Docker

Education

University of British Columbia   *Vancouver BC, Canada*

BACHELORS OF SCIENCE (BSc) IN PHYSICS AND COMPUTER SCIENCE, 3RD YEAR   *Sep 2023 - May 2025*

University of British Columbia   *Vancouver BC, Canada*

BACHELORS OF APPLIED SCIENCE (BASc) IN COMPUTER ENGINEERING, 3.80/4.33 GPA   *Sep 2019 - May 2023*

- Won cybersecurity mining contest (1st of 50) using GPU programming (C++, Cuda)
- Constructed Turing Complete CPU on FPGA board (Verilog)
- Used Python to implement forward and backward operators for convolution and batch norm from scratch (Pytorch)
- Used NextJs and React to set up Frontend, used NodeJs, MongoDB, MySQL, SQL to set up Backend server and database

Projects

Machine Learning for Protein Prediction for Gandeeva Therapeutics

WRANGLED DATA, IMPLEMENTED ML MODELS, AND PLANNED PROJECT   *Sep 2022 - Apr 2023*

- Engineered statistical modeling to enable insightful predictions on protein sequences (Python)
- Researched and implemented complex machine learning models to meet requirements
- Communicated complex technical details in presentations and reports to deliver a clear description of findings
- Used JIRA, followed AGILE methodology, and collaborated using Git to achieve efficient development and seamless integration

Cybersecurity Analysis of a Real-world Web Application

CONDUCTED SECURITY ANALYSIS AND TESTING FOR A VANCOUVER COMPANY   *Sep 2022 - Dec 2022*

- Presented at the 2023 Vancouver Security Special Interest Group
- Won Best Analysis Project of 2023 for the UBC Cybersecurity Course
- Analyzed potential security flaws of a real-world web application and reported issues to protect sensitive data
- Conducted manual penetration testing and automated scanning for vulnerabilities to provide client recommendations

Work Experience

UBC Sauder Learning Labs   *Vancouver BC*

STUDENT ASSISTANT   *Nov 2020 - Present*

- Implemented task automation to streamline the process of organizing video databases (Python)
- Worked with existing and developed REST APIs to implement automated queries in the Panopto Video delivery platform
- Supported the recording of high-end teaching and learning videos with hundreds of high-profile classes at Sauder

UBC Dance Club   *Vancouver BC*

IT MANAGER AND TREASURER   *May 2020 - May 2023*

- Redesigned website for responsiveness and mobile use to increase web traffic over 5 times (HTML, CSS, Javascript, WordPress)
- Balanced budget of $30,000+ to achieve positive revenue to bring five affordable dance classes for 100+ students

Department of National Defense   *Richmond BC*

MOBILE SUPPORT EQUIPMENT OPERATOR   *Aug 2018 - Present*

- Liaised with 7 other units in BC to ensure vehicle availability for domestic deployment (summer)
- Developed exceptional accuracy and attention to detail to ensure technical safety protocols are followed
- Followed instructions closely on complex operational procedures to ensure positive outcomes
- Maintained a calm demeanor in high-stakes situations to ensure operational tasks are completed correctly