

Vincent Chau

vkchau@uw.edu

Web: vincentczhou.github.io

Experience

University of Washington | Bioinformatics Research Intern

Jul. 2023 – Present | Seattle, WA | Advisor: Prof. Brian J. Beliveau

- Building a scalable pipeline for processing **dozens of GB** of genomic data, and optimizing performance using **parallelization** and **vectorized operations** to yield a **150x** decrease in runtime
- Designing a modular event website template using Jekyll, supporting the registration of over **150** attendees and **four** sponsors
- Investigating DNA-interacting proteins using *in situ* mapping technology

Bellevue College | Teaching Assistant (Fundamentals of Computer Science)

Mar. 2023 – Present | Bellevue, WA

- Teaching fundamental data structures and algorithms in **Java**
- Identifying **vulnerabilities** and developing solutions for a **PHP**-based homework grading platform

Projects

vincentczhou.github.io | Personal Portfolio

Nov. 2022 – Present

- Designing an interactive web portfolio using **React** and **Material UI** from scratch
- Developing efficient code to minimize rendering time and provide ease for updates

Bellevue College InfoSec Club Website | Full-Stack Web Application

Nov. 2022 – Present

- Creating original “**capture the flag**”-style cybersecurity challenges for club members to practice with
- Implementing a **Next.JS** backend to handle user input “flag” verification
- Collaborating with others to streamline an efficient deployment system using **Continuous Integration** and **Git**

MaiHome | Arcade Machine Hardware

Sep. 2020 – Present

- Utilizing I2C bus with **Arduino** to interface with and emulate commercial hardware
- Researching existing hardware architecture for a non-documented system
- Troubleshooted hardware issues involving software and hardware integration
- Working with a multilingual international team to develop consumer cost-friendly solutions

MaiTools | Full-Stack Web Application

Jan. 2020 – Jul. 2020

- Created an original frontend using a server-side template engine and vanilla **JavaScript** to facilitate user input
- Implemented an **Express.JS** backend to decrypt and translate user data
- Utilized a **Node.JS** foreign function interface mechanism to enable integration of an existing C++ library into the backend

Pilplup Support | Discord Bot

Sep. 2018 – Jul. 2019

- Integrated **Discord API** to execute user-triggered functions and handle data
- Built a platform to manage real-time auctioning of virtual merchandise

Education

Bellevue College

Bellevue, WA

A.S. in Engineering

Hoffman Calculus Award

Jun. 2023 | GPA: 4.0

Coursework

Multivariable Calculus •
Statistical Analysis •
General Engineering
Physics • General
Chemistry • Cellular
Biology • Fundamentals of
Computer Science

Skills

Programming

CSS • HTML • JavaScript •
Java • Python

Frameworks/Tools

Node.JS • Next.JS • React •
Git

Software

Adobe Photoshop • Adobe
Illustrator

Languages

English (Native) • Mandarin
(Fluent) • Cantonese (Near-
Fluent) • Japanese (JLPT 3)

Leadership

President

Bellevue College

InfoSec Club

2022 – Present

Interests

Computer Science •
Computational Biology •
Penetration Testing •
Reverse Engineering •
Graphic Design • Piano