Alvin Sen Yuan Wu

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https://alvinsenwu.github.io/Portfolio/

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Education

University of Alberta   Sept 2020 - June 2025

- BSc Major in Computing Science Minor in Mathematics
- Relevant Coursework: Algorithms & Data Structures, Database & File Management, Linear Algebra, Calculus, Statistics, Machine Learning, Software Engineering with Object Oriented Design, Quality Assurance, Web Application and Architecture, UI/UX Design, Computer Search, Knowledge, Simulation.

Skills

Languages: Python, C/C++, Java, Matlab, HTML/CSS, XML, PHP, Typescript, Javascript.

Databases/Backend: MongoDB, Firebase/Firestore, mySQL, SQLite. Expres.js, Node.js, Flask.

Frameworks / Others: React.js, Pytorch, Numpy, Pandas, Tensorflow, Android Studio, Git.

Relevant Employment / Experience

Machine Learning RA and Web Developer

University of Alberta Derda Research Group | April 2022 - November 2023

- Undergraduate Research Assistant in GlyNet: A Multi-Task Neural Network for Predicting Protein-Glycan Interactions. PI: Ratmir Derda, Supervisor: Eric J Carpenter.
- Web-App Development for Chemical Compound Search and Sort Project.

Contract Web Developer

Derda Research Group | March 2022

- Creation and maintenance of the Website for the Derda Research Group.
- Technologies Used: WordPress, PHP, Javascript, HTML/CSS.
- Website link

Projects - github.com/AlvinSenWu

NeuroScribe - NatHacks 2023 Hackathon Project - 1st Place with $4000 Funding

- "NeuroScribe" is a tool that harnesses brain waves for mood and hands-free speech communication, giving voices to individuals who have lost their ability to move and speak.
- Utilized two machine learning models that harness brain waves to detect mood and imagined motor movements, alongside three text prediction models (based on mood) to make a seamless user experience.
- Application stack: React.js, Flask, PyTorch, Pandas, Numpy, etc.

QRHunter - Java Android App

- Lightweight android mobile application, where users from across the world compete in a Geo-catching like format. Scanning QR codes is associated with obtaining points, and players can see where they rank amongst other players.
- Object-Oriented Design, Software Development Processes, Software Quality Testing, Agile management.

SoundX - Full Stack Social Media Application - In Progress (expected to complete by June 2025)

- Application for music sharing for users to discover and discuss their favorite artists, songs, and albums.
- Users can connect and share their linked apple music/spotify accounts, where data analytics for streaming services, helping streaming services provide better suggestions for users.
- Application stack: MongoDB, Express.js, React.js, Node.js (MERN stack).