Alvin Sen Yuan Wu

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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, Software Quality, Web Application and Architecture, UI/UX Design, Computational Search, Knowledge, Simulation.

Skills

Languages:	Python, C/C++, Java, Matlab, HTML/CSS, XML, PHP, Typescript, Javascript.
Databases:	MongoDB, Firebase/Firestore, mySQL, SQLite.
Frameworks / Others:	React.js, Pytorch, Numpy, Pandas, Tensorflow, Flask, Android Studio, Keras, 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.
- The Application stack combines React.js with Flask, resulting in a powerful and reliable platform for transforming EEG data into expressive communication.

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, Scrum, etc.

Panda Pomodoro - Discord Bot

- Panda themed Discord bot for enforcing and motivating studying with pomodoro techniques.
- Connect to discord voice calls with options to start, pause, and terminate sessions.
- Application developed in Python with Discord.py.