

David Hu-Liu

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EDUCATION AND CERTIFICATIONS

University of Waterloo

Bachelors of Computer Science and Business Administration

Waterloo, ON

Sept. 2023 – May 2028

Harvard Pre-College Program: **Mathematical Elements of Data Science and Artificial Intelligence**

Udemy: **The Complete 2023 Web Development Bootcamp**

EXPERIENCE

York Region Hackathon: 1st Place Overall

March 2023

Project: HandPilot

York Region, ON

- Using Python and Libraries like OpenCV, Mediapipe, Pyinput, for camera detection and mouse inputs
- Working in a team of 3, using photoshop, canva, and text editors for our pitch
- Competing against more than 250+ students across YRDSB

MakeUC Hackathon: Best implementation of GPT-4 or other LLMs

Nov 2023

Project: Verbate

Waterloo, ON

- Utilizing Node.js, Next.js, React, JS, AWS poly/GPT-4 API to create a voice interactive chatbot.
- Contributed more than 150+ lines of prompting and js code.
- Presented and judged in front of Professors, Software Specialists, Developers, etc.
- Competing against 300+ highschool-university students.

LyonHacks 3: 1st Place Overall

April 2023

Project: DevInk

Vaughan, ON

- Utilizing React.js, HTML/CSS to create a full-stack, login protected code/drawing editor
- Collaborating in a team of 3 to deliver our product in under 36 hours.

Private Snowboard Instructor

December 2021 – Present

Level 1 CASI Certification

Barrie, ON

- Teaching over 75+ clients, drastically improving their riding abilities

PROJECTS

Imagine Recognition ML AI [CIFAR 10] | *Python, Numpy, Matplotlib*

July 2022

- I proposed a Grayscale conversion strategy, yielding 98% accuracy by epoch 10 with training data
- Leveraged Principles of CNN(loss function, activation function, convolution layers, pooling, etc)
- Collaborated in a team of 4, to achieve the best neural network in our Harvard Pre-College class

Chatbot NLTK Machine Learning AI | *NLTK, Pickle, Keras, Numpy*

Aug 2022 – Oct 2022

- Utilizing Python's Natural Language Took Kit library and SGD optimization to create a language processing bot that randomizes its responses based on training data.
- Maximum 91% training accuracy achieved

Three.js Personal Portfolio | *Three.js, GSAP, Draco, HTML/CSS*

June 2023 – Present

- Utilizing blender for the room model, three.js for rendering and camera logic, GSAP for animations, html/css for display, and netlify for hosting.

TECHNICAL SKILLS

Languages: Java, Python, Racket, SQL (Postgres), JavaScript, HTML/CSS

Frameworks: React, Node, Express, Flask, JQuery, RestAPI, Tailwind, Bootstrap, Three.js

Developer Tools: Git, Google Collab, VS Code, Visual Studio, PyCharm

Libraries: pandas, NumPy, Matplotlib, Keras, OpenCV, Jupyter