

# JOTSAROOP SINGH

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## EDUCATION

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### University of Alberta

Bachelor of Science (Honors) in Computer Science

Edmonton, Alberta

Expected May 2028

### Relevant Coursework:

Algorithms I (CMPUT 204), Machine Learning I (CMPUT 267), File and Database Management (CMPUT 291), Linear Algebra I (MATH 125), Applied Statistics (STAT 151), Formal Systems and Logic (CMPUT 272)

## WORK EXPERIENCE

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### Website Development Intern

Vast Overseas Education (Education Consultant)

Amritsar, Punjab

Apr 2024 – Aug 2024

- Collaborated with a cross-functional team to **develop, customize, and maintain a production WordPress website**, supporting business and marketing goals.
- Assisted with **frontend development using HTML, CSS, and JavaScript** to enhance UI/UX and improve page performance.
- Managed **website deployment tasks**, including hosting configuration, domain setup, DNS, SSL certificates, and site migrations. Participated in **feature testing, debugging, and deployment**, ensuring stable releases and production readiness.

## PROJECT

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### [LifeLedger](#)—Financial Risk Simulation Platform | [Github](#)

Python, FastAPI, React (Vite), NumPy

- Built a full-stack financial simulation platform modeling long-term cash flow, investments, and debt.
- Implemented **Monte Carlo simulation for stochastic investment returns** to estimate probability of insolvency and net-worth outcome distributions (p10 / median / p90 outcomes).
- Implemented **backend simulation engine in Python + FastAPI and frontend in React (Vite)**; deployed production version on Render.

### [Focus Tab](#)—Chrome New Tab Extension for Chrome | [Github](#)

JavaScript, HTML, CSS

- Developed a **multi-widget Chrome new-tab extension** featuring a Pomodoro timer, to-do list, music player, customizable backgrounds, weather updates, and daily quotes.
- Integrated **third-party APIs** to fetch real-time weather and daily quote data.
- Published as open source with **700+ installs** and 100+ daily users.

## ACTIVITIES AND LEADERSHIP

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### Undergraduate Association of Computing Science, University of Alberta

#### Junior Representative

Edmonton, Alberta

May 2025-Present

- Represent undergraduate computing science students within a **4,600+ member academic community**.
- Assisted in **organizing club fairs, student orientations, hackathons, and academic events** and contributed to the **development and maintenance of the UACS website**.

### University of Alberta International Students' Association (UAISA)

#### Director of Website

Edmonton, Alberta

May 2025-Present

- Lead the development, maintenance, and optimization of the association's website representing and advocating for **9,000+ international students**.
- Improved **information accessibility, content structure, and navigation** to enhance user experience at scale.

## ADDITIONAL

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**Technical Skills:** Python, JavaScript, HTML, CSS, WordPress, React, Git, REST APIs, NumPy, FastAPI

**Certifications & Training:** Machine Learning with Python: A Practical Introduction by IBM (edX)