

# Sadie Lee

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## EDUCATION

### University of British Columbia

Vancouver, BC, CA

*Bachelor of Arts in Cognitive Systems; Minor in Data Science*

2022 – 2026

**Coursework:** Statistical Inference, Databases in Data Science, Applied Machine Learning, Symbolic Logic, Designing Cognitive Systems, Informatics, Cognitive Neuroscience

## EXPERIENCE

### Undergraduate Intern - Mayo Clinic Platform

Summer 2024

*Mayo Clinic*

- Built a 3D classification model and 3D segmentation model with MR prostate DICOM images to develop and test an end-to-end imaging workflow - PyTorch, TorchIO, torchvision, Nibabel, Pydicom, Sklearn, Linux OS
- Wrote queries in SQL to identify cohorts for potential Accelerate imaging customers
- Created external and internal-facing dashboards with Power BI and DAX for market intelligence and utilization
- Developed technical documentation and process guides for all projects
- Parsed clinical notes to extract diagnoses using Regex

### Research Assistant

May 2023 – April 2024

*BC Children's Hospital Research Institute / UBC Faculty of Medicine*

- Wrote scripts to automate collection and analysis for time in range data – R, tidyverse
- Communicated with participants to provide technical support and effectively resolve app-related issues
- Led focus groups for a co-design approach to gain user feedback on new app features

### Software Developer

Summer 2023

*UBC Emerging Media Lab (EMLx)*

- Designed and implemented a web app for self-guided forest bathing – TypeScript, React, Node.js, MongoDB
- Integrated the Mapbox API for location-based augmented reality in Unity and Needle Engine

### Deep Learning Researcher

March – Dec. 2023

*UBC Multifaceted Innovations in Neurotechnology*

- Classified brain tumor MR images with CNNs – PyTorch
- Conducted literature reviews to explore interaction between humans and reinforcement learning agents

## RESEARCH

### Topological Data Analysis and Interpretability of 3D-Convolutional Neural Networks

*Accepted by 2024 AAAI Undergraduate Consortium*

### Formalizing Ethical Design in Prostate Cancer Image Analysis: A Preliminary Case Study

*Accepted by 2024 IEEE MIT Undergraduate Research Technology Conference*

## TECHNICAL SKILLS

**Languages:** Python, R, SQL, C#, Javascript, Typescript, LaTeX, HTML, DAX

**Technologies & Environments:** Git, Jupyter, Unity, Power BI, MongoDB, React, Next.js, Node.js, REDCap, Windows, Linux

**Libraries:** pandas, numpy, Matplotlib, PyTorch, torchvision, TorchIO, NiBabel, Pydicom, Sklearn, NetworkX, tidyverse

## VOLUNTEERING

### Vice President; Ballet Teacher

Sept. 2023 – Present

*UBC Ballet Club*

- Coordinating the production of events, handling logistics, and managing event budgets
- Teaching weekly intermediate-advanced ballet classes to university students
- Designed and developed a website – TypeScript, Next.js, Node.js, Tailwind

### Data Science Consultant

Jan. 2023 – Apr. 2023

*180 Degrees Consulting*

- Designed and implemented a dashboard in Power BI using KPIs to evaluate impact for a non-profit organization
- Conducted market research and competitive analysis