Sadie Lee

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Education

University of British Columbia Vancouver, BC, CA
Bachelor of Arts in Cognitive Systems *2022 – 2026*
Coursework: Statistical Inference, Statistical Modeling, Applied Machine Learning, Cognitive Neuroscience, Symbolic Logic, Designing Cognitive Systems, Differential Calculus

Experience

Undergraduate Intern - Mayo Clinic Platform Summer 2024
Mayo Clinic
- Building a classification model and image segmentation model to analyze MRI prostate lesions for a use case testing the imaging data pipeline on the Discover platform - PyTorch, NiBabel, Pydicom, scikit-learn
- Creating dashboards in Power BI to visualize healthcare providers' utilization of products and services
- Developing a metadata repository for data sources used in dashboards

Research Assistant May 2023 – April 2024
BC Children's Hospital Research Institute – Tang Laboratory
- Wrote scripts to analyze time in range biomarker data for over 100 participants - R, tidyverse
- Communicated with participants to provide technical support and effectively resolve app-related issues
- Facilitated focus groups for a co-design approach to gain user feedback on new app features
- Writing a manuscript investigating a mobile app for a social-network intervention on individuals with type 1 diabetes in British Columbia

Software Developer May – Sept. 2023
UBC Emerging Media Lab (EMLx)
- Developed a web application to mitigate challenges faced by a 2022 UBC Faculty of Forestry clinical trial studying the health merits of forest bathing - TypeScript, ReactJS, NodeJS, MongoDB
- Integrated Mapbox API for location-based augmented reality

Deep Learning Researcher March – Dec. 2023
UBC Multifaceted Innovations in Neurotechnology
- Classified brain tumor MRIs with convolutional neural networks - PyTorch, Conda, Docker
- Conducted literature reviews to explore interaction between humans and reinforcement learning agents

Projects

Network and Topological Data Analysis in Neuroscience
- Using network analysis and topological data analysis to analyze resting state fMRI data
- Visualized networks with NetworkX and GUDHI for persistence barcode and density

Graph Neural Networks for fMRI
- Developed a graph convolutional neural network model to predict the age of a participant given fMRI scans
- Visualizing anatomical and functional connectomes using Nilearn

Technical Skills

Languages: Python, R, SQL, C#, Javascript, Typescript, LaTeX, HTML/CSS
Frameworks: ReactJS, NodeJS, NextJS
Tools: Git, Docker, Jupyter, Unity, Looker, Power BI, MongoDB
Libraries: pandas, NumPy, Matplotlib, PyTorch, NiBabel, Pydicom, scikit-learn, tidyverse

Leadership Activities

Vice President; Ballet Teacher Sept. 2023 – Present
UBC Ballet Club
- Coordinating the production of performance events, handling logistics, and managing event budgets
- Teaching weekly intermediate-advanced ballet classes to university students