CHRISTOPHER WEST

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OBJECTIVE

Graduate Student with 5+ years of experience in data science and AI research, seeking full-time positions starting October 2023 or later. Open to relocation within Canada.

EDUCATION

Master of Computer Science, University of Waterloo 2021 - (expected) Sept 2023
Thesis on Parameterizing the Spatial Distribution of Renal Tumors
Relevant Coursework: Optimization for Data Science, Reinforcement Learning, Computer Vision.

Bachelor of Computer Science, Honours, University of British Columbia 2017 - 2021
Thesis on Heuristics-Based Federated Image Data Integration
Relevant Coursework: Machine Learning and Data Mining, Advanced Machine Learning, Advanced Algorithms.

SKILLS

Technical Skills Python, Numpy, Scipy, Keras, Tensorflow, Pytorch, Latex, Linux
Soft Skills Team Leadership, Technical Writing, Project Management, Presentations & Public Speaking

EXPERIENCE

Instructional and Research Assistant Sept 2021 - Current
University of Waterloo Cheriton School of Computer Science *Waterloo, ON*

- Exploratory research on the intersection of medical imaging, kidney dynamics and 3D contrastive/transfer learning techniques
- Team lead and first author for preprint: *Random (Un)rounding : Vulnerabilities in Discrete Attribute Disclosure in the 2021 Canadian Census*, see here
- Published SIAM book review: *Transformers for Natural Language Processing, 2nd Edition*, see here
- Workshop Attendee: *Sex Differences in Physiology: Mathematical Modelling and Analysis*
- Teaching and leadership experience in CS115/135 (Functional Programming with Racket)
- Head instructional assistant for CS231 (Algorithmic Problem Solving with Python)

Summer Researcher in Privacy May 2020 - Aug 2020
University of British Columbia Data Science Institute *Vancouver, BC*

- Updated and refactored existing Privacy-preserving GAN synthetic data generation framework to TensorFlow 2.0.
- Experimented with novel federated heuristic privacy frameworks in the medical domain.
- Coauthor with Microsoft researchers in *Reducing bias and increasing utility by federated generative modeling of medical images using a centralized adversary.* Press release here.

Summer Researcher in Medicine Summer 2018, 2019
University of Alberta Computing Science Department *Edmonton, AB*

- First author and keynote speaker for: *Assessing the Capability of Deep-Learning Models in Parkinson's Disease Diagnosis* at ICSM 2019, see here
- Extended deep learning pose-estimation models to medical imaging to improve outcomes for spinal-cord-injury patients
- Worked together with medical professionals to develop practical applications for rehabilitation-based research

PROJECTS

CantoTools A suite of minimalist tools to help language learners learn Cantonese. Includes a C#-based pop-up dictionary reading application with persistent bookmark and word-status tracking. Also includes a Colab-powered application for scraping YouTube videos based on Cantonese word frequency information. See repo here or on my website.

Sentiment Keyboard Co-developed Sentiment Keyboard, an app for detecting and preventing cyberbullying using simple NLP sentiment analysis and AI. Featured in the local news here, here and here.

EXTRA-CURRICULAR ACTIVITIES

- nwPlus Communications Director (Hackathon organization)
- UBC Weightlifting and Powerlifting Sponsorship Director
- Active in the Mandarin and Cantonese language learning community

LEADERSHIP

- Head of a team of 7 TAs for administrating and running CS231 over multiple terms
- Volleyball team captain for 10+ players over multiple years
- Team lead for preprint on 2021 Canadian census disclosure

AWARDS

- Math Domestic Graduate Student Award (High Standing)
- University of Waterloo Graduate Scholarship
- Honours with Distinction in Computer Science
- John Hopkins MedHacks 2019 Sponsored Competitor
- AP National Scholar
- Ross and Verna Tate Internship Award