

ADITYA (ADI) CHINCHURE

+1 (778) 892-5108 ◊ Vancouver, BC, Canada

aditya10@cs.ubc.ca ◊ [linkedin.com/in/adityachinchure](https://www.linkedin.com/in/adityachinchure) ◊ www.adityachinchure.com

SUMMARY

Graduate student working in computer vision and NLP at UBC. Aspiring ML researcher or engineer, with 3 years of research and academic experience.

EDUCATION

Master of Computer Science, University of British Columbia Expected 2023
Supervisors: Dr. Leonid Sigal & Dr. Renjie Liao | GPA: 4.0 (A+)

Bachelor of Computer Science, Honors, University of British Columbia 2016 - 2021
Thesis: Refinement Architectures for Referring Image Segmentation
GPA: 3.9 (A)

WORK EXPERIENCE

Borealis AI, Royal Bank of Canada Sep 2022 onwards
Machine Learning Research Intern | Supervisors: Dr. Fred Tung, Dr. Leonid Sigal Vancouver, BC
Built a novel method for encoding temporal point processes for downstream tasks such as forecasting. The model can disentangle underlying processes, which allows for more interpretability with lower error rates.

Univeristy of British Columbia Sep 2021 onwards
Graduate Research Assistant | Supervisors: Dr. Leonid Sigal, Dr. Renjie Liao Vancouver, BC
Working on multimodal learning research, at the intersection of Vision and NLP. Incorporated external commonsense knowledge in Visual Question Answering (VQA) using a modified image-text Transformer. Using pre-training and weak supervision, our method outperforms all similarly sized (sub-150M parameter) models in knowledge-based VQA tasks. Furthermore, we are working on structured commonsense generation from images, using large language models.

Univeristy of British Columbia Sep 2020 - Aug 2021
Undergraduate Research Assistant | Supervisors: Dr. Leonid Sigal Vancouver, BC
Built structured attention methods in Transformer models for visual-linguistic tasks. Incorporated structured attention masks to improve image and text alignment in the ViLBERT (Lu et al., NeurIPS 2019).

LEAP Project, UBC & BC Cancer Research May 2020 - Aug 2020
Research Assistant | Supervisors: Dr. Ivan Beschastnikh, Dr. Aline Talhouk Vancouver, BC
Designed and implemented a connector module that enabled 2x fast data retrieval from REDCap research databases for a privacy-focused federated ML project. Validated the method through four performance tests, by implementing a federated logistic regression model on the LEAP platform.

Hypercontext May 2019 - Aug 2019
ML Engineer (Co-op) Toronto, ON
Developed machine learning models for text classification, sentiment analysis and entity recognition using BERT. Worked on end-to-end engineering efforts, including data retrieval and cleanup, an all-new REST API using Flask for providing insights using the ML model, and the ability to re-train and deploy the model using AWS and Docker.

PUBLICATIONS

VLC-BERT: Visual Question Answering with Contextualized Commonsense Knowledge
Sahithya Ravi*, Aditya Chinchure*, Leonid Sigal, Renjie Liao, Vered Schwartz (*equal contribution)
Winter Conference on Applications of Computer Vision (WACV) 2023

LEAP: Private and Federated Data Analysis for Healthcare [Poster]
Matheus Stolet, Chris Yoon, Kalli Leung, Aditya Chinchure, Mathias Lécuyer, Aline Talhouk, Ivan Beschastnikh
Emerging Technologies: BC's AI Showcase, organized by UBC's Centre for Artificial Intelligence Decision-making and Action (CAIDA)

SKILLS

Topics	Computer Vision, NLP, Vision-Language, Time series, Graph Models
Programming Languages	Python, R, Javascript
Frameworks	Machine Learning (<i>PyTorch</i>), Data Science (<i>Pandas, Numpy, scikit-learn</i>), Visualization (<i>matplotlib, seaborn</i>), Experiment tracking (<i>wandb, tensorboard</i>), Software and web (<i>Flask</i>)
Tools	Slurm, Git, Docker, AWS, GCP

ACADEMIC PROJECTS

Data-efficient and fast NeRFs. Developed DE-TensorRF, a model that can render 3D objects with as few as 3 images, and in under 15 min on a single GPU. We achieved the highest grade in our class, and led to collaboration efforts with Dr. Helge Rhodin's research group. Visit the [project website](#).

Visual Commonsense Generation. Developed an extension to VisualCOMET to generate general-purpose commonsense knowledge from images. Showed improvements on coherence and diversity scores of a novel topic modelling algorithm using the generated knowledge. View the [project report](#).

Graph-enhanced Transformers for Referring Expressions Comprehension. Incorporated Graph Neural Networks in a visual-linguistic Transformer. View the [project report](#).

Universal ML API. A powerful Python API template, built on Flask and Docker, for plug-and-play use with machine learning models in PyTorch or Tensorflow. Visit the [Github repository](#) for more details.

AWARDS AND SCHOLARSHIPS

UBC International Student Award Sep 2021
A monetary award for incoming international students for Graduate Studies at UBC.

Nominated for CRA Outstanding Undergraduate Researcher Award Oct 2020
Nominated by Dr. Ivan Beschastnikh for my work on the LEAP project.

Work Learn International Undergraduate Research Award May 2020
Funding for my research internship under Dr Ivan Beschastnikh and Dr Aline Talhouk on the LEAP project.

Faculty of Science – International Student Scholarship Sep 2019
A monetary award of \$10,000 for strong academic achievement, engagement with faculty and potential for scholarly contributions within computer science.

Dean's Honour List Jan 2017 - Apr 2021
Maintained an A grade throughout my undergraduate studies at UBC

TEACHING AND VOLUNTEERING

- Teaching Assistant for CPSC 425 (Computer Vision), CPSC 404 (Advanced Relational Databases), CPSC 322 (Introduction to Artificial Intelligence), CPSC 304 (Introduction to Databases)
- Reviewer for TPAMI 2022, 2023.

EXTRA-CURRICULAR

- I am an amateur photographer, with over 150M views and 1.2M downloads on [Unsplash](#). My work is featured and used by Porter, Air Canada, BuzzFeed, Notion, and other brands. Instagram: [instagram.com/aditya.chinchure](https://www.instagram.com/aditya.chinchure)
- I was the Marketing Director for IdeasXChange, a UBC club. Led the organization of UBC's first inclusive innovation case competition, [Innohacks](#), to tackle challenging problems in developing countries.