ADITYA (ADI) CHINCHURE

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SUMMARY

Second-year PhD student in Computer Vision and NLP at UBC, supervised by Dr. Leonid Sigal and Dr. Vered Shwartz. Interested in image and video understanding and generation, across reasoning and safety domains.

EDUCATION

PhD in Computer Science, University of British Columbia — May 2024 onwards
Supervisors: Dr. Leonid Sigal & Dr. Vered Shwartz | 4YF Fellowship

Master of Science in Computer Science, University of British Columbia — 2024
Supervisors: Dr. Leonid Sigal & Dr. Renjie Liao | GPA: 4.0 (A+)
Thesis: Visual question answering with contextualized commonsense knowledge

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

WORK EXPERIENCE

Ideogram — Nov 2025 onwards
Machine Learning Intern | Supervisors: Dr. Mohammad Norouzi — *Toronto, ON*
- Developing methods to improve Text-to-Image generation using fine-grained evaluation.

University of British Columbia — Sep 2021 onwards
Graduate Research Assistant | Supervisors: Dr. Leonid Sigal, Dr. Vered Shwartz, Dr. Renjie Liao — *Vancouver, BC*
- Actively pursuing (as PhD student, previously MSc.) several research projects, across video understanding and generation, bias and fairness in Generative AI models, and world models [see works under Publications].

Toyota Technological Institute at Chicago — Oct 2024 - Dec 2024
Visiting Student Researcher | Supervisors: Dr. Matthew Turk — *Chicago, IL, USA*
- Designed a tool to analyze how biases in text-to-image are interlinked, and developed a bias mitigation strategy.

Borealis AI, Royal Bank of Canada — Sep 2022 - May 2023
Machine Learning Research Intern | Supervisors: Dr. Fred Tung, Dr. Leonid Sigal — *Vancouver, BC*
- Built a novel transformer-based method for encoding temporal point processes, like financial transactions data, for downstream tasks such as time series forecasting and financial modelling [PD-EST under Publications].

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 faster data retrieval from REDCap research databases for a privacy-focused federated ML project.

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

Spotlight: Identifying and Localizing Video Generation Errors Using VLMs
Aditya Chinchure, Sahithya Ravi, Pushkar Shukla, Vered Shwartz, Leonid Sigal
Under Review — Link

SPIKE-RL: Video-LLMs meet Bayesian Surprise
Sahithya Ravi, Aditya Chinchure, Raymond Ng, Leonid Sigal, Vered Shwartz
Under Review — Link

Position: World Models must live in Parallel Worlds
Sahithya Ravi*, Aditya Chinchure*, Pushkar Shukla, Vered Shwartz, Leonid Sigal (*equal contribution, order determined by a coin toss)
NeurIPS 2025 Workshop on Bridging Language, Agent, and World Models for Reasoning and Planning (LAW) — Link

Mitigate One, Skew Another? Tackling Intersectional Biases in Text-to-Image Models
Pushkar Shukla*, Aditya Chinchure*, Emily Diana, Alexander Tolbert, Kartik Hosanagar, Vineeth N Balasubramanian, Leonid Sigal, Matthew A Turk (*equal contribution)
Conference on Empirical Methods in Natural Language Processing (EMNLP) 2025 Findings — Link

Black Swan: Abductive and Defeasible Video Reasoning in Unpredictable Events
Aditya Chinchure*, Sahithya Ravi*, Raymond Ng, Vered Shwartz, Boyang Li, Leonid Sigal (*equal contribution)
Conference on Computer Vision and Pattern Recognition (CVPR) 2025 — Link

From local concepts to universals: Evaluating the multicultural understanding of vision-language models
Mehar Bhatia, Sahithya Ravi*, Aditya Chinchure*, Eunjeong Hwang, Vered Shwartz (*equal contribution)
Conference on Empirical Methods in Natural Language Processing (EMNLP) 2024 — Link

TIBET: Identifying and Evaluating Biases in Text-to-Image Generative Models
Aditya Chinchure*, Pushkar Shukla*, Gaurav Bhatt, Kiri Salij, Kartik Hosanagar, Leonid Sigal, Matthew A. Turk (*equal contribution)
European Conference on Computer Vision (ECCV) 2024 — Link

PD-EST: Process-disentangling Event Sequence Transformer
Aditya Chinchure, Fredrick Tung, Leonid Sigal
Internal Document

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 — Link

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)

ACADEMIC & TECHNICAL PROJECTS

Data-efficient and fast NeRFs. Developed DE-TensoRF, a model that can render 3D objects with as few as 3 images, and in under 15 min on a single GPU, by enhancing TensoRF. Visit the project page.

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 blog post for more details.

AWARDS, SCHOLARSHIPS, AND GRANTS

Four Year Doctoral Fellowship - UBC May 2024 -
For outstanding students joining UBC for their doctoral studies. $18,200 per year + tuition.

President's Academic Excellence Initiative PhD Award May 2024 -
Award for all PhD students at UBC. $1500 per year.

Vector Research Grant 2022 -
A yearly grant for graduate students ($6000) who are a part of Vector Institute of AI.

UBC International Student Award Sep 2021 - Apr 2024
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 368 (Databases for Data Science), CPSC 425 (Computer Vision), CPSC 404 (Advanced Relational Databases), CPSC 322 (Introduction to Artificial Intelligence), CPSC 304 (Introduction to Databases).
- Reviewer for (but not limited to) TPAMI 2022, TPAMI 2023, CVPR 2024, XAI4CV Workshop 2024, ECCV 2024*, CVPR 2025*, ICCV 2025, NeurIPS 2025, eXCV @ ICCV 2025, AAAI 2026 (*outstanding reviewer designation).