

Ashutosh Adhikari

aashu.ad@gmail.com | [Google Scholar](#)
[ashutosh-adhikari.github.io](https://github.com/ashutosh-adhikari) | [linkedin.com/in/adadhika](https://www.linkedin.com/in/adadhika)

EDUCATION

David R. Cheriton School of Computer Science, University of Waterloo, Waterloo Sep 2018 - Dec 2020
Major: Computer Science, MMath Co-op (Thesis) (Grade: 91.5/100)
Areas of Expertise: Natural Language Processing, Machine Learning, Reinforcement Learning, Deep Learning

Dhirubhai Ambani Institute of Information and Communication Technology, India Aug 2014 - May 2018
Major: Information and Communication Technology, BTech (Grade: 8.73/10)
Key Courses: Algorithms, Software Engineering, Data Analysis and Visualization, Databases, Computational Optimization

RELEVANT EXPERIENCE

Microsoft Turing, Canada Feb 2021 - Present
Applied Scientist 2

- Trained and shipped large language models (LLM) that increase user engagement by over 10% on Bing and are currently in use.
- Core Developer of the new conversational Bing feature powered by large language models from OpenAI.

Data Systems Group at University of Waterloo, Waterloo, ON Sep 2018 - Dec 2020
Graduate Research Assistant with [Prof. Pascal Poupart](#) and [Prof. Jimmy Lin](#)

- Developed and open sourced state-of-the-art models for document classification and solving text games.
- Achieved 24.6% score improvement over previous text reinforcement learning agents by constructing and maintaining dynamic knowledge graphs from raw text.

Montreal Institute for Learning Algorithms (Mila), Montreal, QC Sep 2019 - May 2020
Research Intern with [Prof. William L. Hamilton](#)

- Built graph-based transformer agents in collaboration with Mila and Microsoft Research Montreal for solving games in the TextWorld framework aka.ms/textworld.
- Achieved state-of-the-art scores on over 500 text games.

Indian Institute of Science, Bangalore, India May 2017 - Jul 2017
Research Intern at Video Analytics Lab with [Prof. RV Babu](#)

- Worked with Convolutional Neural Networks using PyTorch, Caffe and Theano to generate minimalist yet discriminative visual representations for sketch images.

RELEVANT PUBLICATIONS

Learning Object-Oriented Dynamics for Planning from Text

Guiliang Liu, *Ashutosh Adhikari*, Amir-massoud Farahmand, Pascal Poupart. Accepted at **ICLR 2022**. [pdf](#)

Learning Dynamic Belief Graphs to Generalize on Text-based games

*Ashutosh Adhikari**, Xingdi Yuan*, Marc-Alexandre Côté*, Mikuláš Zelinka, Marc-Antoine Rondeau, Romain Laroche, Pascal Poupart, Jian Tang, Adam Trischler, William L. Hamilton. Poster at **NeurIPS 2020**. [pdf](#) [code](#)

Exploring the Limits of Simple Learners in Knowledge Distillation for Document Classification with DocBERT

Ashutosh Adhikari, Achyudh Ram, Raphael Tang, William L. Hamilton, Jimmy Lin. Oral at the **REPL4NLP Workshop** at ACL 2020. [pdf](#) [code](#) [video](#)

Rethinking Complex Neural Network Architectures for Document Classification

*Ashutosh Adhikari**, Achyudh Ram*, Raphael Tang, Jimmy Lin. Oral at **NAACL-HLT 2019**. [pdf](#) [code](#) [video](#)

A POMDP-based Context-Aware Approach for Trust Modeling

Ashutosh Adhikari, Robin Cohen. Oral at the **TRUST Workshop** at AAMAS 2019. [pdf](#)

FLOPs as a Direct Optimization Objective for Learning Sparse Neural Networks

Raphael Tang, *Ashutosh Adhikari*, Jimmy Lin. Poster at the **CDNNRIA Workshop** at NeurIPS 2018. [pdf](#)

SERVICES AND AWARDS

Mentorship : Mentor at [Athena Pathways](#) (an initiative aimed to facilitate inclusivity in AI).

Teaching Assistantship : CS 480 (Intro to Machine Learning); CS 115 and CS 135 (Basic Programming courses)

Awards : David R. Cheriton Scholarship, International Masters Student Award.

Reviewing : Reviewer for workshops at ICML 2019 and NeurIPS 2020.

Volunteering: Organized training sessions for women and children in Dena village (India) with Pratibha Foundation (NGO).

TECHNICAL SKILLS

Languages : Python, Java, C, SQL.

Frameworks and Tools : PyTorch, Keras, PyCaffe, Numpy, Scipy, LaTeX, MATLAB, Git, sk-learn, OpenMP, opencv.