

TU VU

tuvu@vt.edu

<https://tuvllms.github.io>

APPOINTMENTS

Virginia Tech

Assistant Professor, Computer Science

Research Interests: *natural language processing & machine learning*

August 2024 —

Google DeepMind

Research Scientist

August 2023 — *present*

EDUCATION

University of Massachusetts, Amherst

M.S/PH.D. in Computer Science

Advisor: [Mohit Iyyer](#)

Thesis committee: [Mohit Iyyer](#), [Subhransu Maji](#), [Hamed Zamani](#), [Thang Luong](#), [Colin Raffel](#)

2016 — 2023

2018 — 2023

Vietnam National University, Hanoi

B.S. Honors Program in Computer Science

Highest distinction (class rank: 1/100)

2009 — 2013

PROFESSIONAL EXPERIENCE

Google DeepMind

Student Researcher *with* [Thang Luong](#) & [Quoc Le](#)

Fall 2022 — Spring 2023

Google DeepMind

Research Intern *with* [Thibault Sellam](#) & [Elizabeth Clark](#)

Summer 2022

Google DeepMind

Student Researcher *with* [Noah Constant](#)

Winter 2021 — Spring 2022

Google DeepMind

Research Intern & Student Researcher *with* [Daniel Cer](#) & [Noah Constant](#)

Summer 2021 — Fall 2021

Google DeepMind

Student Researcher *with* [Thang Luong](#) & [Quoc Le](#)

Winter 2020 — Spring 2021

Google DeepMind

Research Intern *with* [Grady Simon](#) & [Zi Yang](#) & [Nan Hua](#)

Summer 2020

Microsoft Research

Research Intern *with* [Tong Wang](#) & [Tsendsuren Munkhdalai](#) & [Adam Trischler](#)

Summer 2019

*: equal contribution

For an up-to-date list of my research papers, please see my [Google Scholar](#) profile.

Foundational Autoraters: Taming Large Language Models for Better Automatic Evaluation

Tu Vu*, Kalpesh Krishna*, Salaheddin Alzubi, Chris Tar, Manaal Faruqui, Yun-Hsuan Sung
arXiv preprint 2024

// The top-performing generative model on RewardBench trained solely on publicly available data

Gemini: A Family of Highly Capable Multimodal Models

Google Gemini Team: Rohan Anil, Rohan Anil, Sebastian Borgeaud, Yonghui Wu, Jean-Baptiste Alayrac, Jiahui Yu, Radu Soricut, Johan Schalkwyk, Andrew Dai, Anja Hauth, and others including **Tu Vu**

arXiv preprint 2023

// Google AI Blog

FreshLLMs: Refreshing Large Language Models with Search Engine Augmentation

Tu Vu, Mohit Iyyer, Xuezhi Wang, Noah Constant, Jerry Wei, Jason Wei, Chris Tar, Yun-Hsuan Sung, Denny Zhou, Quoc Le, and Thang Luong

ACL 2024 Findings

// Our dataset and method have inspired or been used for the development of Google's Gemini, Perplexity.AI's Online LLMs, You.com, and Contextual AI's RAG 2.0

The Flan Collection: Designing Data and Methods for Effective Instruction Tuning

Shayne Longpre, Le Hou, **Tu Vu**, Albert Webson, Hyung Won Chung, Yi Tay, Denny Zhou, Quoc Le, Barret Zoph, Jason Wei, and Adam Roberts

ICML 2023

// Google Research Blog

Mixture-of-experts meets instruction tuning: A winning combination for large language models

Sheng Shen, Le Hou, Yanqi Zhou, Nan Du, Shayne Longpre, Jason Wei, Hyung Won Chung, Barret Zoph, William Fedus, Xinyun Chen, **Tu Vu**, Yuexin Wu, Wuyang Chen, Albert Webson, Yunxuan Li, Vincent Zhao, Hongkun Yu, Kurt Keutzer, Trevor Darrell, and Denny Zhou

ICLR 2024

SPoT: Better Frozen Model Adaptation through Soft Prompt Transfer

Tu Vu, Brian Lester, Noah Constant, Rami Al-Rfou, and Daniel Cer

ACL 2022

Overcoming Catastrophic Forgetting in Zero-Shot Cross-Lingual Generation

Tu Vu, Aditya Barua, Brian Lester, Daniel Cer, Mohit Iyyer, and Noah Constant

EMNLP 2022

STraTA: Self-Training with Task Augmentation for Better Few-shot Learning

Tu Vu, Thang Luong, Quoc Le, Grady Simon, and Mohit Iyyer

EMNLP 2021

Exploring and Predicting Transferability across NLP Tasks

Tu Vu, Tong Wang, Tsendsuren Munkhdalai, Alessandro Sordoni, Adam Trischler, Andrew Mattarella-Micke, Subhansu Maji, and Mohit Iyyer

EMNLP 2020

ADVISING

PHD ADVISEES:

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| Quy ^{et} Do, incoming PhD student at Virginia Tech | Fall 2024 — |
| Thinh Pham, incoming PhD student at Virginia Tech | Fall 2024 — |
| Rishab Balasubramanian, incoming PhD student at Virginia Tech | Fall 2024 — |
| Pin-Jie (Linus) Lin, incoming PhD student at Virginia Tech | Fall 2024 — |

OTHERS:

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| Prateek Yadav, Research Intern at Google Gemini | Summer 2024 |
| Simeng (Shirley) Han, Student Researcher at Google DeepMind | Summer 2024 |
| Salaheddin Alzubi, Masters student at UMass Amherst | Fall 2022 — Spring 2023 |
| Dheeraj Mekala, PhD student at UCSD | Spring — Summer 2022 |

RECENT INVITED TALKS

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| Efficient Adaptation of Large Language Models Graph Neural Networks Reading Group, Google | November 2023 |
| Effective and Efficient Transfer Learning in the Era of Large Language Models Faculty job talk | Spring 2023 |
| Overcoming Catastrophic Forgetting in Zero-Shot Cross-Lingual Generation Parameter Efficient Tuning Methods Sync, Google | October 2022 |
| Transfer Learning with Large-scale Language Models Lecture at VietAI | August 2022 |
| The Appeal of Parameter-efficient Transfer Learning Natural Language Accelerated Team, Google | June 2022 |
| SPoT: Better Frozen Model Adaptation through Soft Prompt Transfer Parameter Efficient Tuning Methods Sync, Google | December 2021 |

ACADEMIC SERVICE

Area Chair for ACL 2024, EMNLP 2024, COLING 2025

Program Committee/Reviewer for NEURIPS, COLM, ACL, EMNLP, NAACL, COLING, CoNLL, INLG

SELECTED MEDIA

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|--|----------|
| GEMINI: Google AI Blog | 2023 |
| FRESHLLMs: ZDNET | 2023 |
| THE FLAN COLLECTION: Google Research Blog | 2023 |
| SPoT: Headlines of Google AI's Natural Language Accelerated Newsletter | Q1, 2022 |

SELECTED AWARDS & HONORS & FUNDING

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|---|-------------|
| Google Student Researchships | 2020 — 2023 |
| UMass Amherst Graduate Assistantships | 2016 — 2023 |
| Honda Y-E-S Award for young engineers and scientists, Vietnam <i>// in the top 10 nationally</i> | 2013 |
| Outstanding Academic and Co-curricular Achievements, Vietnam National University | 2013 |
| Prominent Young Figure Award, Vietnam National University | 2010 & 2012 |
| First Runner-up Prize, International Programming Contest, Japan <i>// ranked 2nd among 64 teams internationally</i> | 2011 |
| Outstanding Young Talent of the Capital City, Vietnam <i>// in the top 100 most outstanding young talents selected from a wide range of fields</i> | 2010 |
| Champion Prize, National Mathematical Olympiad, Vietnam <i>// ranked 1st among more than 600 contestants nationally</i> | 2010 |
| A number of prizes in National/International Olympiads (in both Mathematics and Informatics) | 2009 — 2013 |
| A number of academic scholarships for undergraduate students | 2009 — 2013 |

PATENTS

*: original inventor

Frozen Model Adaptation Through Soft Prompt Transfer

Tu Vu*, Daniel Cer, Noah Constant, Brian Lester, Rami Al-Rfou

U.S. Patent Application, 17/863,840

Task Augmentation and Self-training for Improved Few-shot Learning

Thang Luong, **Tu Vu***, Quoc Le, Grady Simon

U.S. Patent Application, 17/826,690