Tu Vu

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https://tuvllms.github.io

Appointments

Virginia Tech   August 2024 —
Assistant Professor, Computer Science
Research Interests: *large language models* & *transfer learning*

Google Research   August 2023 — *present*
Research Scientist

Education

University of Massachusetts, Amherst   2016 — 2023
M.S/Ph.D. in Computer Science
Advisor: Mohit Iyyer   2018 — 2023

Vietnam National University, Hanoi   2009 — 2013
B.S. Honors Program in Computer Science
Highest distinction (class rank: 1/100)

Professional Experience

Google Deepmind   Fall 2022 — Spring 2023
Student Researcher *with* Thang Luong & Quoc Le

Google Deepmind   Summer 2022
Research Intern *with* Thibault Sellam & Elizabeth Clark

Google Deepmind   Winter 2021 — Spring 2022
Student Researcher *with* Noah Constant

Google Research   Summer 2021 — Fall 2021
Research Intern & Student Researcher *with* Daniel Cer & Noah Constant

Google Deepmind   Winter 2020 — Spring 2021
Student Researcher *with* Thang Luong & Quoc Le

Google Research   Summer 2020
Research Intern *with* Grady Simon & Zi Yang & Nan Hua

Microsoft Research   Summer 2019
Research Intern *with* Tong Wang & Tsendsuren Munkhdalai & Adam Trischler

Selected Preprints & Publications

For an up-to-date list of my research papers, please see my Google Scholar profile or my Semantic Scholar profile.

[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
arXiv preprint 2023

[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 V Le, Barret Zoph, Jason Wei, and Adam Roberts
ICML 2023

[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
arXiv preprint 2023

[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, Minh-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, Subhransu Maji, and Mohit Iyyer
EMNLP 2020

Recent Invited Talks

[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

Program Committee/Reviewer for various conferences and workshops in machine learning and natural language processing, including NeurIPS, ARR, ACL, EMNLP, NAACL, COLING, CoNLL, INLG.

Selected Media

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

Google Student Researcherships	2020 — 2023
UMass Amherst Graduate Assistantships	2016 — 2023
Honda Y-E-S Award for young engineers and scientists, Vietnam (in the top 10 nationally)	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 (2nd among 64 teams internationally)	2011
Outstanding Young Talent of the Capital City, Vietnam (in the top 100 most outstanding young talents selected from a wide range of fields)	2010
Champion Prize, National Mathematical Olympiad, Vietnam (1st among more than 600 contestants nationally)	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, Brian Lester, Noah Constant, Rami Al-Rfou, Daniel Cer
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