

# TU VU

[tuvu@vt.edu](mailto: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](#), [Subhansu 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

## SELECTED PREPRINTS & PUBLICATIONS

---

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

## 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, Subhransu Maji, and Mohit Iyyer

**EMNLP 2020**

## ADVISING

---

### PHD ADVISEES:

**Quyet 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:

Prateek Yadav, Research Intern at <b>Google Gemini</b>	Summer 2024
Simeng (Shirley) Han, Student Researcher at <b>Google DeepMind</b>	Summer 2024
Dheeraj Mekala, PhD student at <b>UCSD</b>	Spring & Summer 2022

## RECENT INVITED TALKS

---

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

## ACADEMIC SERVICE

---

<b>Area Chair</b> for ACL 2024, EMNLP 2024
<b>Program Committee/Reviewer</b> for NEURIPS, COLM, ACL, EMNLP, NAACL, COLING, CoNLL, INLG

## SELECTED MEDIA

---

FRESHLLMs: <a href="#">ZDNET</a>	2023
THE FLAN COLLECTION: <a href="#">Google Research Blog</a>	2023
SPoT: <a href="#">Headlines of Google AI's Natural Language Accelerated Newsletter</a>	Q1, 2022

## SELECTED AWARDS & HONORS & FUNDING

---

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 2<sup>nd</sup> 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 1<sup>st</sup> 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