

Khanh Nguyen

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RESEARCH OVERVIEW

Areas of Interest: human-AI interaction, natural language processing, machine learning

Vision: Current AI agents lack incentive and skills required for serving humans. My goal is to develop helpful, safe agents that are endowed with human-like cognitive and communication capabilities.

EDUCATION

2015-2022	Ph.D. in Computer Science University of Maryland, College Park Advisor: Hal Daumé III
2011-2015	B.S. in Computer Science University of Massachusetts, Amherst Advisor: Brendan O'Connor and Erik Learned-Miller

WORK EXPERIENCE

August 2023–2025	Postdoctoral Researcher University of California, Berkeley Mentor: Stuart Russell
August 2022–2023	Postdoctoral Researcher Princeton University Mentor: Karthik Narasimhan
May–Aug 2020	Research intern Microsoft Research New York Mentors: Dipendra Misra, Robert Schapire, Miro Dudík
May–Aug 2018	Research intern Microsoft Research Redmond Mentors: Debadepta Dey, Bill Dolan, Chris Brockett
May–Aug 2017	Research intern Microsoft Research Redmond Mentor: Paul Mineiro
Summers 2014-2016	Software Engineer intern Google
May–Aug 2013	Software Engineer intern TripAdvisor

PUBLICATIONS

Peer-Reviewed

- ICML'23 *Language Models are Bounded Pragmatic Speakers: Understanding RLHF from a Bayesian Cognitive Modeling Perspective*
Khanh Nguyen (Workshop on Theory of Mind in Communicating Agents)
- ACL'23 *Define, Evaluate, and Improve Task-Oriented Cognitive Capabilities for Instruction Generation Models*
Lingjun Zhao, **Khanh Nguyen**, and Hal Daumé III (findings)
- ICML'22 *A Framework for Requesting Rich and Contextually Useful Information from Humans*
Khanh Nguyen, Yonatan Bisk, and Hal Daumé III (spotlight)
- ICML'21 *Interactive Learning from Activity Description*
Khanh Nguyen, Dipendra Misra, Robert Schapire, Miro Dudík, and Patrick Shafto (short talk)
- EMNLP'19 *Help, Anna! Vision-based Navigation with Natural Multimodal Assistance via Retrospective Curiosity-Encouraging Imitation Learning*
Khanh Nguyen and Hal Daumé III (oral)
- EMNLP'19 *Global Voices: Crossing Borders in Automatic News Summarization*
Khanh Nguyen and Hal Daumé III (Workshop on New Frontiers in Summarization)
- CVPR'19 *Vision-based Navigation with Language-based Assistance via Imitation Learning with Indirect Intervention*
Khanh Nguyen, Debadeepta Dey, Chris Brockett and Bill Dolan
- EMNLP'17 *Reinforcement Learning for Bandit Neural Machine Translation with Simulated Human Feedback*
Khanh Nguyen, Hal Daumé III, Jordan Boyd-Graber
- WMT'17 *The UMD Neural Machine Translation Systems at WMT17 Bandit Learning Task*
Amr Sharaf, Shi Feng, **Khanh Nguyen**, Kianté Brantley, and Hal Daumé III
- IWSLT'15 *The UMD Machine Translation Systems at IWSLT 2015*
Amittai Axelrod, Ahmed Elgohary, Marianna Martindale, **Khanh Nguyen**, Xing Niu, Yogarshi Vyas, Marine Carpuat
- EMNLP'15 *Posterior Calibration and Exploratory Analysis for Natural Language Processing Models*
Khanh Nguyen and Brendan O'Connor

In review

- 2023 *Hallucination Detection for Grounded Instruction Generation*
Lingjun Zhao, **Khanh Nguyen**, Hal Daumé III
- 2023 *Progressively Efficient Learning*
Ruijie Zheng, **Khanh Nguyen**, Furong Huang, Hal Daumé III
- 2023 *Language-Guided World Models*
Alex Zhang, Albert Lin, Jens Tuyls, **Khanh Nguyen**, Karthik Narasimhan

Technical Reports

- 2020 *Active Imitation Learning from Multiple Non-Deterministic Teachers: Formulation, Challenges, and Algorithms*

- Khanh Nguyen** and Hal Daumé III
 2016 *Imitation Learning with Recurrent Neural Networks*
Khanh Nguyen
 2015 *The Fundamentals of Neural Networks*
Khanh Nguyen and Hieu Pham

Books

Machine Learning: Noodles, Soups and Recipes

INVITED TALKS

- 2022 *New Frameworks for Human-AI Communication*
 VinAI Research
 Princeton University's NLP group
 UC Berkeley's Center for Human-AI Interaction (CHAI)
 Microsoft Research
 University of Maryland's CLIP (NLP) Colloquium
- Dec 2020 *Sequential Decision-Making*
 VietAI
- Aug 2020 *Interactive Learning from Human Instructions*
 Microsoft Research
- Sep 2019 *Empowering Navigation Agents with Natural Multimodal Assistance from Humans*
 University of Maryland, College Park
- Jun 2019 *Empowering Navigation Agents with Human Assistance*
 Microsoft Research and New York University
- Aug 2018 *Vision-Based Navigation via Language-based Interaction*
 Microsoft Research
- Nov 2017 *Structured Prediction and Reinforcement Learning*
 VietAI

ACADEMIC SERVICES

Area Chair at EMNLP 2023 (human-centered NLP)

Workshop Organizer InterNLP (NeurIPS 2022)

Program Chair of the 8th Mid-Atlantic Student Colloquium on Speech, Language and Learning (MASC-SLL 2020)

111 participants from 19 institutions

42% participants and 20/56 presenters are female

Speakers lineup featured black, white, Asian researchers

Reviewer ICLR (2023, 2022), ICML (2020, 2019, 2017), NeurIPS (2021, 2020, 2023), EMNLP (2019), CoNLL (2021, 2019)

Volunteer NeurIPS (2022), ICML (2022), EMNLP (2019), CVPR (2019)

TEACHING EXPERIENCE (AT UMD)

Fall 2021	Teaching assistant Just Machine Learning (fairness and bias in ML) (CMSC828Z)
Spring 2021	Teaching assistant Computational Linguistic I (CMSC723, <i>the only TA for a 60-student class</i>)
Spring 2020	Teaching assistant Advanced Numerical Optimization (CMSC764)
Fall 2020	Teaching assistant Common-sense Reasoning and NLP (CMSC828J)
Fall 2016	Teaching assistant Discrete Structures (CMSC250)
Spring 2016	Teaching assistant Social Media Computing (CMSC498J)
Fall 2015	Teaching assistant Object Oriented Programming I (CMSC131)

OUTREACH ACTIVITIES

Feb 2016–present	Administrator of Machine Learners Facebook page and YouTube channel for sharing knowledge about machine learning, research, internships, and graduate application 7,200 Facebook followers and 780 YouTube subscribers (Nov 2021)
2010-2014	Administrator of Vietnam Olympiad in Informatics Forum Forum on algorithms and data structures for high school students 15,000 members (Nov 2021)

HONORS & AWARDS

2012-2014	Regional Finalist ACM International Collegiate Programming Contest
2009	Bronze Medal International Olympiad in Informatics (in Bulgaria)
2009	First place Vietnamese Team Selection Examination for the International Olympiad

Updated August 2023