

Thuy-Ngoc Nguyen

University of Dayton

300 College Park

Dayton, OH 45469

✉ ngoc.nguyen@udayton.edu

🏠 <https://ngocntkt.github.io/>

Google Scholar: <https://scholar.google.it/citations?user=7xwD7AkAAAAAJ>

RESEARCH INTERESTS

Recommender Systems, Computational Cognitive Modeling of Human Behavior, Artificial Intelligence, Human-AI Interaction, Machine Learning, Databases, and Data Mining.

EMPLOYMENT

Aug. 2023 – **Department of Computer Science, University of Dayton, OH, USA**
present Assistant Professor

Jan. 2023 – **Miner School of Computer and Information Sciences, University of Massachusetts Lowell, MA, USA**
Jul. 2023 Visiting Faculty Lecturer

Oct. 2019 – **Carnegie Mellon University, PA, USA**
Dec. 2022 Postdoctoral Fellow, Dynamic Decision-Making Lab

2018 – 2019 **Faculty of Computer Science – Free University of Bozen-Bolzano, Italy**
Research Assistant

Spring 2018 **Insight Centre for Data Analytics – University College Cork, Ireland**
Visiting Ph.D. student

2010-2015 **Faculty of Information Technology – HoChiMinh City University of Education, Vietnam**
Lecturer

EDUCATION

2015 – 2019 **Free University of Bozen-Bolzano, Italy**
Ph.D. in Computer Science

2011 – 2013 **Vietnam National University – HoChiMinh City University of Science, Vietnam**
M.S. in Information Systems

2006 – 2010 **HoChiMinh City University of Education, Vietnam**
B.S. in Computer Science Education

TEACHING EXPERIENCE

INSTRUCTOR

2023-present **Computing I**

(~120 undergraduate students)

Minor School of Computer and Information Sciences, University of Massachusetts Lowell, USA

The course introduces problem-solving and program design concepts in a C language. Linear data structures; arrays, records, and linked lists. Abstract data types, stacks, and queues. Simple sorting algorithms and basic file I/O

2010-2015 **Introduction to Databases**

(~50 undergraduate students)

Faculty of Information Technology, HoChiMinh City University of Education, Vietnam

Introductory database course

Database Management Systems

(~50 undergraduate students)

Faculty of Information Technology, HoChiMinh City University of Education, Vietnam

The course covers basic concepts of Database Management Systems (DBMS), database administration, ANSI SQL and T-SQL (Transact SQL) coding with Microsoft SQL Server.

System Analysis and Design

(~40 undergraduate students)

Faculty of Information Technology, HoChiMinh City University of Education, Vietnam

The course covers the basics of analyzing system requirements using conceptual data modeling ERD (Entity Relationship Diagram) and UML (Unified Modeling Languages), designing new systems with relational data model, and implementing system prototype with GUI design.

Business Intelligence Systems

(~35 undergraduate students)

Faculty of Information Technology, HoChiMinh City, University of Education, Vietnam

This course covers basic concepts of data warehouse design and data manipulation, ETL process (Extraction - Transformation and Loading), OLAP (Online Analytical Processing) tool and data visualization to create dashboards and analytic reports.

TEACHING ASSISTANT

2021-2022 **Decision Models and Games**

(15 undergraduate students in 2022)

Social and Decision Sciences, Carnegie Mellon University, Pittsburgh, PA

Hold weekly office hours, design quizzes, and grade homework assignments.

2020-2021 **Dynamic Decisions**

(18 undergraduate students in Spring 2020 and Spring 2021)

Social and Decision Sciences, Carnegie Mellon University, Pittsburgh, PA

Hold weekly office hours, design quizzes, and grade homework assignments.

TEACHING VOLUNTEER

Summer **Web Development with Meteor JS**

2016 (~60 female students from all majors)

Rails Girls 54 project organized by the Faculty of Computer Science – Free University of Bozen-Bolzano, Italy
Introductory web technology course using Meteor JS web framework.

PUBLICATIONS (in reverse chronological order)

JOURNAL ARTICLES

- [1] **Nguyen, T. N.** & Gonzalez, C. (2023). Minimap: An interactive dynamic decision-making game for search and rescue missions. *Behavior Research Methods*. <https://doi.org/10.3758/s13428-023-02149-7>
- [2] Gupta, P., **Nguyen, T. N.**, Gonzalez, C., & Woolley, A. W. (2023). Fostering Collective Intelligence in Human–AI Collaboration: Laying the Groundwork for COHUMAN. *Topics in Cognitive Science*.
- [3] **Nguyen, T. N.**, Phan, D. N., & Gonzalez, C. (2022). SpeedyIBL: A comprehensive, precise, and fast implementation of instance-based learning theory. *Behavior Research Methods*, 1-24.
- [4] Zhao, M., Eadeh, F., **Nguyen, T. N.**, Gupta, P., Gonzalez, C., Admoni, H., and Woolley, A. W. (2022). Teaching Agents to Understand Teamwork: Evaluating and Predicting Collective Intelligence as a Latent Variable via Hidden Markov Model. *Computers in Human Behavior*, 139, 107524.
- [5] **Nguyen, T. N.**, & Gonzalez, C. (2021). Theory of Mind from Observation in Cognitive Models and Humans. *Topics in Cognitive Science*.
- [6] Phan, D. N., & **Nguyen, T. N.** (2021). An accelerated IRNN-Iteratively Reweighted Nuclear Norm algorithm for nonconvex nonsmooth low-rank minimization problems. *Journal of Computational and Applied Mathematics*, 396, 113602.
- [7] **Nguyen, T. N.**, Ricci, F., Delic, A., & Bridge, D. (2019). Conflict resolution in group decision making: insights from a simulation study. *User Modeling and User-Adapted Interaction*, 29(5), 895-941.
- [8] **Nguyen, T. N.**, & Ricci, F. (2018). A chat-based group recommender system for tourism. *Information Technology & Tourism*, 18(1-4), 5-28.
- [9] Delic, A., Neidhardt, J., **Nguyen, T. N.**, & Ricci, F. (2018). An observational user study for group recommender systems in the tourism domain. *Information Technology & Tourism*, 19(1-4), 87-116.

REFEREED CONFERENCE PAPERS

- [10] Eadeh, F., Zhao, M., **Nguyen, T. N.**, Gupta, P., Gonzalez, C., Admoni, H., & Woolley, A. W. (2022). Good for me, but bad for we: How anger can motivate individual performance but inhibit teamwork. *ACM Collective Intelligence Conference*, October 20-21. Virtual meeting.
- [11] Gulati, A., **Nguyen, T. N.**, & Gonzalez, C. (2021). Task complexity and performance in individuals and groups without communication. *AAAI Fall Symposium on Theory of Mind for Teams*.
- [12] McDonald, C., **Nguyen, T. N.**, & Gonzalez, C. (2021). Multi-Agent Specialization and Coordination in a Gridworld Task. *AAAI Fall Symposium on Theory of Mind for Teams*.
- [13] **Nguyen, T. N.**, Phan, D. N., & Gonzalez, C. (2021) A Cognitive Hysteretic-IBL Model for Coordinated Multi-Agent Transportation Problems. *ACM Collective Intelligence Conference*, June 29-June30. Virtual meeting.
- [14] Eadeh, F., Zhao, M., **Nguyen, T. N.**, Gupta, P., Gonzalez, C., Admoni, H., and Woolley, A. W. (2021). Anger: Helpful or Harmful for Team Performance? *ACM Collective Intelligence Conference*, June 29-June30. Virtual meeting.
- [15] **Nguyen, T. N.**, & Gonzalez, C. (2020). Cognitive Machine Theory of Mind. In Proceedings of the 42nd Annual Meeting of the Cognitive Science Society (*CogSci 2020*). *42nd Annual Meeting of the Cognitive Science Society (CogSci 2020)*, July 29-August 1, Virtual meeting. (pp. 2560-2566).
- [16] **Nguyen, T. N.**, & Gonzalez, C. (2020). Effects of Decision Complexity in Goal seeking Gridworlds: A Comparison of Instance Based Learning and Reinforcement Learning Agents. *18th Annual Meeting of the International Conference on Cognitive Modelling (ICCM 2020)*. July 20-July 31, Virtual meeting.
- [17] **Nguyen, T. N.**, & Ricci, F. (2018). Situation-dependent combination of long-term and session-based preferences in group recommendations: an experimental analysis. In *Proceedings of the 33rd Annual ACM Symposium on Applied Computing* (pp. 1366-1373).
- [18] **Nguyen, T. N.**, & Ricci, F. (2017). Dynamic elicitation of user preferences in a chat-based group recommender system. In *Proceedings of the 32nd Symposium on Applied Computing* (pp. 1685-1692).
- [19] **Nguyen, T. N.**, & Ricci, F. (2017). Combining long-term and discussion-generated preferences in group recommendations. In *Proceedings of the 25th Conference on User Modeling, Adaptation and Personalization (UMAP 2017)* (pp. 377-378).
- [20] **Nguyen, T. N.**, & Ricci, F. (2017). A chat-based group recommender system for tourism. In *Information and Communication Technologies in Tourism 2017* (pp. 17-30). Springer.
- [21] **Nguyen, T. N.** (2017). Conversational group recommender systems. In *Proceedings of the 25th Conference on User Modeling, Adaptation and Personalization (UMAP 2017)* (pp. 331-334).

- [22] Delic, A., Neidhardt, J., **Nguyen, T. N.**, Ricci, F., Rook, L., Werthner, H., & Zanker, M. (2016). Observing group decision making processes. In *Proceedings of the 10th ACM conference on recommender systems* (pp. 147-150).

REFEREED WORKSHOP, POSTER, AND DEMO PAPERS

- [23] **Nguyen, T. N.**, & Ricci, F. (2017). Preference elicitation for group recommender systems. Italian Information Retrieval Workshop. June 05-07.
- [24] Delic, A., Neidhardt, J., **Nguyen, T. N.**, & Ricci, F. (2016). Research Methods for Group Recommender System. *Workshop on Recommenders in Tourism* (in conjunction with *RecSys'16*)
- [25] **Nguyen, T. N.**, & Ricci, F. (2016). Supporting group decision making with recommendations and explanations. *ACM Conference on User Modeling, Adaptation and Personalization* (in conjunction with *UMAP 2016*) (Poster).

BOOK CHAPTERS

- [26] Delic, A., **Nguyen, T. N.**, & Tkalcic, M. (2020). Group Decision-Making and Designing Group Recommender Systems. *Handbook of e-Tourism*, 1-23.

PREPRINTS

- [27] **Nguyen, T. N.**, McDonald, C., & Gonzalez, C. (2023). Credit assignment: Challenges and opportunities in developing human-like ai agents. *arXiv preprint arXiv:2307.08171*.

AWARDS AND SCHOLARSHIPS

- 2020 **Best PhD Student Award Nomination**, Faculty of Computer Science, University of Bozen-Bolzano, Italy
- 2016 – 2017 **Student Travel Award**, ACM UMAP Conference
- 2015 – 2018 **PhD Scholarship**, University of Bozen-Bolzano, Italy
- 2013 **NAFOSTED Fellowship for Young Researchers**, Vietnam National Foundation for Science and Technology Development (VN NAFOSTED)
- 2010 **Best Undergraduate Research Award in STEM**, HoChiMinh City University of Education, Vietnam

ACADEMIC ACTIVITIES

WORKSHOP CO-ORGANIZER

- AAAI 2021 Fall Symposium on Computational Theory of Mind for Human-Machine Teams
- ENTER 2017 e-Tourism Workshop on Decision Making in Tourism, Rome, Italy

INVITED TALK - SEMINAR AT OTHER ACADEMIC INSTITUTIONS:

- e-Commerce Group – Faculty of Informatics, Vienna University of Technology, Austria, Dec 20th, 2018
- Dynamic Decision-Making Lab – Carnegie Mellon University, May 1st, 2019 (via Skype)

PROGRAM COMMITTEE

- ACM Conference on Recommender Systems (RecSys from 2018 to 2022)
- ACM Conference on User Modelling, Adaptation and Personalization (*UMAP* from 2018 to 2023)
- ACM The Web Conference (WWW'2022)

PAPER REVIEWER

- ACM Transactions on Intelligent Systems and Technology (TIST)
- ACM Transactions on Information Systems (TOIS)
- Journal of Intelligent Information Systems
- User Modeling and User-Adapted Interaction
- Personal and Ubiquitous Computing
- Frontiers in Computer Science
- The 42nd Annual Meeting of the Cognitive Science Society (CogSci 2020, 2022)
- Topics in Cognitive Science