

Viet Quoc Duong

(585) 733-5492

vqduong@wm.edu

vduong143.github.io

EDUCATION

COLLEGE OF WILLIAM & MARY

Doctor of Philosophy in Computer Science

- Advisor: Huajie Shao

WILLIAMSBURG, VA

January 2022 - Present

UNIVERSITY OF ROCHESTER

Master of Science in Computer Science

- Advisor: Lenhart Schubert
- Cumulative GPA: 3.56/4.00
- Concentration on Artificial Intelligence and Computational Linguistics
- Thesis: Towards Schema-based Knowledge Extraction from Social Media Texts through Semantic Parsing.
- Relevant Coursework: Logical Foundation of Artificial Intelligence, Machine Learning, Natural Language Understanding, Statistical Speech and Language Processing, Formal Semantics, Advanced Algorithms, Markov Chain and Random Processes.

ROCHESTER, NY

August 2018 - August 2021

Bachelor of Arts in Data Science

September 2014 - May 2018

Bachelor of Science in Mathematics

- Awarded Distinction in both majors.
- Minor in Financial Economics.
- Dean's Scholarship Recipient, all eligible semesters.
- Relevant Coursework: Data Mining, Artificial Intelligence, Data Structures, Algorithm Design, and Efficiency Analysis, Mathematical Statistics, Computational Statistics, Applied Econometrics, Real Analysis, and Linear Algebra with Differential Equation.
- Projects: Time-series Analysis on Paychex, Inc. Sales Data (Sponsored by Paychex, Inc.), Applications of the Autoregressive Conditional Condition Model on NASDAQ Intraday Database.
- Extracurricular Activities: Data Science Undergraduate Council, Society of Undergraduate Math Students, and Intramural Soccer League.

TEACHING EXPERIENCE

UNIVERSITY OF ROCHESTER

Teaching Assistant, Department of Computer Science

ROCHESTER, NY

August 2016 - December 2017

- Assisted instructor with the supervision of weekly laboratory sessions.
- Wrote evaluation scripts and marked grades for Java and data structure programming assignments.
- Helped students refine programming techniques, computational reasoning, and problem-solving skills.

PROFESSIONAL HISTORY

UNIVERSITY OF ROCHESTER

*Graduate Research Assistant in Artificial Intelligence and Computational Linguistics,
Department of Computer Science*

ROCHESTER, NY

August 2018 - December 2021

- Contributed to the design of unscoped logical forms, a novel meaning representation of language, by expanding the existing gold annotation database and extending annotation schemas to cover new linguistic phenomena.
- Developed high-fidelity semantic parsing systems, allowing for the full expressivity of natural language and natural-logic-like inference based on unscoped logical forms.
- Experimented with a variety of semantic parsing technologies, ranging from rule-based transducers from syntactic dependency structures to transition-based Abstract Meaning Representation (AMR) parsers using state-of-the-art sequence-to-sequence learning neural networks.
- Constructed implementations of scalable language inference engines for unscoped logical forms, integrating general deductive, probabilistic, and specialized inference mechanisms.
- Presented up-to-date publications relevant to the ongoing research topics in the weekly reading group.

Research Assistant at Visual Intelligence and Social Multimedia Analytics Lab,

September 2017 - December 2021

Department of Computer Science

- Collected and analyzed data obtained from social networks for researching various social phenomena such as sexual harassment in college, the social impacts of the COVID-19 pandemic, and public opinions on COVID-19 vaccines.
- Attended weekly research meetings to report research progress, present papers, and discuss related works in Social Media and Artificial Intelligence research.

SIMON BUSINESS SCHOOL

ROCHESTER, NY

Research Assistant

June 2017 - December 2017

- Extracted data on the European capital market after the Industrial Revolution by analyzing stock advertisements and quotes in 19th-century British newspapers.
- Contributed to the development of a transactional database of European stocks, pertaining to a research project studying the rise of the manufacturing sector in the European post-industrial economy.

Research Assistant

September 2016 - October 2016

- Browsed social networks and corporate websites to obtain econometric, educational, and employment data of business professionals as part of a Ph.D. doctoral research project studying the impact of rehiring former executives on firm performance.
- Created datasets in Excel to accommodate financial modeling.

PAPERS AND PRESENTATIONS

Publications

Lyu, H., Wu, W., Wang, J., Duong, V., Zhang, X., & Luo, J. (2021). Social Media Study of Public Opinions on Potential COVID-19 Vaccines: Informing Dissent, Disparities, and Dissemination. *Intelligent medicine* (2021).

Kim, G. L., Duong, V., Lu, X., and Schubert, L. (2021). A Transition-based Parser for Unscoped Episodic Logical Forms. In *Proceedings of the 14th International Conference on Computational Semantics (IWCS 2021)*.

Kim, G., Juvekar, M., Ekmekciu, J., Duong, V., and Schubert, L. (2021). A (Mostly) Symbolic System for Monotonic Inference with Unscoped Episodic Logical Forms. In *Proceedings of the 1st and 2nd Workshops on Natural Logic Meets Machine Learning (NALOMA 2021)*.

Duong, V., Pham, P., Yang, T., Wang, Y., & Luo, J. (2020). The Ivory Tower Lost: How College Students Respond Differently than the General Public to the COVID-19 Pandemic. In *Proceedings of the 2020 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2020)*.

Kim, G., Kane, B., Duong, V., Mendiratta, M., McGuire, G., Sackstein, S., Platonov, G., and Schubert, L. (2019, August). Generating discourse inferences from unscoped episodic logical formulas. In *Proceedings of the First International Workshop on Designing Meaning Representations (DMR 2019)*.

Workshop Presentations

Duong, V., Pham, P., Bose, R., & Luo, J. (2020). # MeToo on Campus: Studying College Sexual Assault at Scale Using Data Reported on Social Media. Presented at the Workshops for 12th International AAAI Conference on Web and Social Media (ICWSM-18). arXiv preprint arXiv:2001.05970.

SKILLS AND QUALIFICATIONS

Certificates

Deep Learning,

April 2020

DeepLearning.AI, Coursera

- **Coursework:** Neural Networks and Deep Learning, Improving Deep Neural Networks, Structuring Machine Learning Projects, Convolutional Neural Networks, Sequence Models.

Skills

- **Programming Languages:** Python, Common Lisp, Java, R, SQL, STATA.
- **Data Collection:** Twitter API, Reddit API.
- **Data Analysis:** PyTorch, Tensorflow, Keras, Numpy, Pandas, Scikit-learn, Matplotlib.
- **Tools:** Microsoft Office, Jupyter, LaTeX, Git.