

# Viet Quoc Duong

(585) 733-5492  
vqduong@wm.edu  
vduong143.github.io

## EDUCATION

### COLLEGE OF WILLIAM & MARY

*Doctor of Philosophy in Computer Science*

**WILLIAMSBURG, VA**

*January 2022 - Present*

- Advisor: Huajie Shao
- Cumulative GPA: 3.67/4.0
- Research concentrations: Deep Learning, Anomaly Detection, Artificial Intelligence.
- Relevant coursework: Deep Representation Learning, Machine Learning Systems, Data Analysis and Simulation, Compiler and Parallel Computing, Data Visualization.

### UNIVERSITY OF ROCHESTER

*Master of Science in Computer Science*

**ROCHESTER, NY**

*August 2018 - August 2021*

- Advisor: Lenhart Schubert
- Tuition Award recipient, all eligible semesters.
- Concentration in 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.

*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 Model on NASDAQ Intraday Database.

## TEACHING EXPERIENCE

### COLLEGE OF WILLIAM & MARY

*Teaching Assistant, Department of Computer Science*

**WILLIAMSBURG, VA**

*January 2022 - Present*

- CSCI-241 Data Structures
- CSCI-301 Software Development

### UNIVERSITY OF ROCHESTER

*Teaching Assistant, Department of Computer Science*

**ROCHESTER, NY**

*August 2016 - December 2017*

- CSC-172 Data Structures and Algorithms

## PROFESSIONAL EXPERIENCE

### 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.

*Research Assistant at Visual Intelligence and Social Multimedia Analytics Lab,  
Department of Computer Science*

*September 2017 - December 2021*

- 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.

## **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.
- Gathered and processed datasets for 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., Ekmekci, 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.
- **Data Collection:** Twitter API, Reddit API.
- **Data Analysis:** PyTorch, Tensorflow, Keras, Numpy, Pandas, Scikit-learn, Matplotlib.
- **Tools:** Microsoft Office, Jupyter, LaTeX, Git.