

CONTACT INFORMATION	<p><b>Homepage:</b> <a href="https://www.cs.cmu.edu/~vijayv/">https://www.cs.cmu.edu/~vijayv/</a></p> <p><b>E-mail:</b> <a href="mailto:vijayv@andrew.cmu.edu">vijayv@andrew.cmu.edu</a></p> <p><b>Github:</b> <a href="https://github.com/viswavi">github.com/viswavi</a></p>
RESEARCH STATEMENT	I aim to build tools that make it easier for practitioners to develop AI systems.
EDUCATION	<p><b>Carnegie Mellon University</b>, School of Computer Science, Pittsburgh, PA 2022–2027 (expected)</p> <ul style="list-style-type: none"> <li>• Ph.D in Language and Information Technologies <span style="float: right;">GPA: 3.92/4.30</span></li> <li>• <i>Advisors:</i> Sherry Tongshuang Wu and Graham Neubig</li> </ul> <p><b>Carnegie Mellon University</b>, School of Computer Science, Pittsburgh, PA 2020–2022 (expected)</p> <ul style="list-style-type: none"> <li>• M.S. in Intelligent Information Systems <span style="float: right;">GPA: 4.05/4.30</span></li> <li>• <i>Advisors:</i> Prof. Graham Neubig and Dr. Pengfei Liu</li> <li>• <i>Relevant Courses:</i> Algorithms for NLP, Probabilistic Graphical Models, Question Answering, Convex Optimization, Search Engines</li> </ul> <p><b>Carnegie Mellon University</b>, Mellon College of Science, Pittsburgh, PA <span style="float: right;">2012–2016</span></p> <ul style="list-style-type: none"> <li>• B.S. in Mathematics, with minors in Computer Science and Language Technologies</li> <li>• <i>Undegradute Research Advisor:</i> Prof. Eric Nyberg</li> <li>• <i>Relevant Courses:</i> Real Analysis I and II, Intro to Theoretical Computer Science, Algebraic Structures, Basic Logic, Probability</li> </ul>
FELLOWSHIPS AND AWARDS	<ul style="list-style-type: none"> <li>• Outstanding Demo Paper, ACL 2022 (top 3 papers out of 75 system demo papers presented)</li> <li>• NEC Student Research Fellow, 2022-2023</li> <li>• Co-PI, Microsoft “Accelerate Foundation Models Research” Grant, 2023 (\$20,000, from Microsoft Research)</li> <li>• Johnson &amp; Johnson Undergraduate Research Award (presented at CMU’s “Meeting of the Minds”), 2015</li> <li>• Thiel “20 Under 20” Fellowship Finalist, 2012</li> </ul>
PUBLICATIONS	<ol style="list-style-type: none"> <li>1. <b>Vijay Viswanathan</b>, Kiril Gashteovski, Carolin Lawrence, Tongshuang Wu, Graham Neubig. 2024. “Large Language Models Enable Few-Shot Clustering”. In <i>Transactions of the Association for Computational Linguistics (ACL)</i> (to appear).</li> <li>2. <b>Vijay Viswanathan*</b>, Chenyang Zhao*, Amanda Bertsch, Tongshuang Wu, Graham Neubig. 2023. “Prompt2Model: Generating Deployable Models from Natural Language Instructions”. In <i>Conference on Empirical Methods in Natural Language Processing Demo Track (EMNLP Demo Track 2023)</i>.</li> <li>3. <b>Vijay Viswanathan</b>, Luyu Gao, Tongshuang Wu, Pengfei Liu, Graham Neubig. 2023. “DataFinder: Scientific Dataset Recommendation from Natural Language Descriptions”. In <i>Annual Conference of the Association for Computational Linguistics (ACL 2023)</i>.</li> <li>4. Aryeh Tiktinsky*, <b>Vijay Viswanathan*</b>, Danna Niezni, Dana Meron Azagury, Yosi Shamay, Hillel Taub-Tabib, Tom Hope, Yoav Goldberg. 2021. “An <math>N</math>-ary Relation Extraction Dataset for Drug Combinations”. In <i>Proceedings of the 2022 Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL 2022)</i>. <b>Oral</b>.</li> <li>5. Yang Xiao, Jinlan Fu, Weizhe Yuan, <b>Vijay Viswanathan</b>, Zhoumianze Liu, Yixin Liu, Graham Neubig, Pengfei Liu. 2022. “DataLab: A Platform for Data Analysis and Intervention”. In <i>Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics, System Demonstrations Track (ACL Demo Track 2022)</i>. <b>*Outstanding Demo Paper*</b>.</li> </ol>

6. **Vijay Viswanathan**, Graham Neubig, Pengfei Liu. 2021. “CitationIE: Leveraging the Citation Graph for Scientific Information Extraction”. In *Proceedings of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing (Volume 1: Long Papers) (ACL-IJCNLP 2021)*. **Oral**.
7. Siddhant Arora\*, Alissa Ostapenko\*, **Vijay Viswanathan\***, Siddharth Dalmia\*, Florian Metze, Shinji Watanabe, Alan W Black. 2021. “Rethinking End-to-End Evaluation of Decomposable Tasks: A Case Study on Spoken Language Understanding”. In *22nd Annual Conference of the International Speech Communication Association (Interspeech 2021)*.

\* authors contributed equally

#### PRESS COVERAGE

- **2023**
  - “The push to make big AI small” — Axios
  - “CMU & Tsinghua U’s Prompt2Model Generates Deployable Models Following Natural Language Instructions” — SyncedReview / Jiqi Zhixin
  - “Researchers from CMU and Tsinghua University Propose Prompt2Model: A General Purpose Method that Generates Deployable AI Models from Natural Language Instructions” — MarkTechPost

#### MENTORED STUDENTS

- Yuanchen Bai (CMU) May 2022 - Oct 2023  
Had first paper accepted to a workshop at AACL in Nov 2023 (co-led with Raoyi Huang). Co-advised with Tzu-Sheng Kuo, and Tongshuang Wu.
- Raoyi Huang (CMU) May 2022 - Oct 2023  
Had first paper accepted to a workshop at AACL in Nov 2023 (co-led with Yuanchen Bai). Co-advised with Tzu-Sheng Kuo, and Tongshuang Wu.
- Chenyang Zhao (Tsinghua Uni.) Mar 2023-Now  
Had first paper accepted to EMNLP Demo 2023 (co-led with Vijay Viswanathan). Co-advised with Graham Neubig and Tongshuang Wu.
- Vanya Bannihatti Kumar (CMU) Aug 2023-Now  
Co-advised with Graham Neubig and Tongshuang Wu.
- Ritu Gala (CMU) Aug 2023-Now  
Collaborating with Saumya Gandhi and co-advised with Graham Neubig and Tongshuang Wu. Submitted a paper as co-first author to ACL 2024 (under review).
- Saumya Gandhi (CMU) Aug 2023-Now  
Collaborating with Ritu Gala and co-advised with Graham Neubig and Tongshuang Wu. Submitted a paper as co-first author to ACL 2024 (under review).
- Xueying Jia (CMU) Oct 2023-Now  
Collaborating with Chenyang Zhao and co-advised with Graham Neubig and Tongshuang Wu.
- Jiaxin Ge (Peking Uni.) Dec 2023-Now  
Co-advised with Graham Neubig and Hongyin Luo (MIT).

#### RESEARCH EXPERIENCE

- **Carnegie Mellon University, Language Technologies Institute** Aug 2022–present  
*Doctoral Researcher* with Profs. Sherry Tongshuang Wu and Graham Neubig Pittsburgh, PA
  - Studying applications of data generation for NLP as an NEC Student Research Fellow.
  - Designing new algorithms for semi-supervised clustering for diverse tasks such as open knowledge base canonicalization and document clustering.
- **Carnegie Mellon University, Language Technologies Institute** Aug 2020–May 2022  
*Research Assistant* for Prof. Graham Neubig and Dr. Pengfei Liu Pittsburgh, PA
  - Studied extracting critical structured information (e.g. methods and metrics) from full scientific texts, using the *SciREX* dataset
  - Proposed using the citation graph in a neural multi-task information extraction system, giving state-of-the-art results (oral presentation at the *ACL-IJCNLP 2021* conference)
  - Working on automatically recommending datasets to use for a given natural language system description (submitted to *ARR Dec '22*, currently in revision)

- **Allen Institute for Artificial Intelligence (AI2)** Summer 2021  
*Research Intern* at AI2 Israel, with Prof. Yoav Goldberg Remote
  - Worked on extracting a database of drug interactions from text in biomedical abstracts
  - Supported the construction of a novel annotated dataset for discovering drug interactions by implementing an efficient modeling framework, implementing new relation extraction metrics, and benchmarking state-of-the-art models for this new task (submitted to *ARR Nov '22*)
  - Developed novel task-specific pretraining scheme to leverage unlabeled data
- **Carnegie Mellon University, Language Technologies Institute** Jan 2015 - May 2016  
*Research Assistant* for Prof. Eric Nyberg Pittsburgh, PA
  - Created a query-to-question conversion system to convert a search engine query to its intent
  - Won \$1000 Johnson & Johnson Award at CMU's undergraduate research symposium
  - Developed method for using an ensemble of adaptive sampling methods in active learning

WORK  
EXPERIENCE

- **Uber ATG** Apr 2019 - Aug 2020  
*Software Engineer*, Prediction team (under Dr. Micol Marchetti-Bowick) Pittsburgh, PA
  - Developed model enabling autonomous cars to jointly predict spatial paths and vehicle-vehicle interactions, considerably improving the comfort of autonomous driving in traffic
  - Owned system to measure the autonomous car's predictions of other vehicles via simulation
  - Built application to crowdsource labels for road interactions in dense traffic from onboard sensor logs
- **Scaled Inference** Mar 2017 - Mar 2019  
*Inference Engineer*, Statistical Modeling team Palo Alto, CA
  - Implemented algorithms for contextual, adaptive A/B optimization. Wrote first production version of our policy search algorithm and efficient Bayesian inference from scratch in Go
  - Responsible for debugging and improving statistical models and RL algorithms in production
- **Yik Yak** Jun 2016 - Dec 2016  
*Software Engineer*, Machine Intelligence Team (under Dr. Marsal Gavalda) Atlanta, GA
  - Designed and implemented the ranking component of a user recommendation system for Yik Yak's location-based social network
  - Trained deep models on large user-generated text and image data (from >100M messages)
  - Built user interface to crowdsource user relevance data to tune our ranking model
  - Deployed ranker to production via Docker and Kubernetes

SERVICE

- Student Member, CMU LTI Diversity, Equity, and Inclusion (DEI) Committee, 2022-2023
- Reviewer, Controllable Generative Modeling in Language and Vision (CtrlGen) Workshop at NeurIPS, 2021
- Chair, Student Committee for CMU LTI Faculty Hiring, 2022
- Member, Student Committee for CMU LTI Faculty Hiring, 2021
- Teaching Assistant for "Multilingual Natural Language Processing" (11-737), Spring 2022

STANDARDIZED  
TEST SCORES

- GRE: 170/170 (Quantitative), 167/170 (Verbal), 5.5/6.0 (Writing) taken on 10/2/2021

REFERENCES

- Dr. **Graham Neubig**  
 Associate Professor at Carnegie Mellon University  
 E-mail: gneubig@andrew.cmu.edu
- Dr. **Sherry Tongshuang Wu**  
 Assistant Professor at Carnegie Mellon University  
 E-mail: sherryw@cs.cmu.edu
- Dr. **Yoav Goldberg**  
 Research Director at Allen Institute for Artificial Intelligence, Israel and Professor at Bar Ilan University  
 E-mail: yoavg@allenai.org
- Dr. **Kiril Gashteovski**

Senior Research Scientist at NEC Laboratories Europe  
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**Dr. Micol Marchetti-Bowick**  
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(formerly, Manager at Uber ATG)  
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