

Prithviraj (Raj) Ammanabrolu

ASSISTANT PROFESSOR · UNIVERSITY OF CALIFORNIA, SAN DIEGO

RESEARCH SCIENTIST · MOSAICML, DATABRICKS

AREAS: ARTIFICIAL INTELLIGENCE, MACHINE LEARNING, REINFORCEMENT LEARNING, NATURAL LANGUAGE PROCESSING

✉ prithvi@ucsd.edu | ✉ raja@databricks.com | 🏠 prithvirajva.com | 📷 rajammanabrolu | 🐦 rajammanabrolu

I perform research to better answer the question of how to imbue AI learning agents with the ability to understand and generate contextually relevant natural language in service of achieving a goal. This work lies primarily at the intersection of Machine Learning, especially Reinforcement Learning, and Natural Language Processing. The core theme of my research involves creating trustworthy and responsible language-based AI agents that are able to: (1) interactively gather and align to human preferences via feedback; and (2) build and use neurosymbolic world models that guide the agent's actions in grounded environments. I additionally teach courses and mentor PhD students at the graduate level, in my capacity as the director of the [PEARLS Lab](#) at UCSD, to enable them to pursue research in line with these goals.

Professional Experience

- July 2024 **Assistant Professor**, Department of CSE, University of California, San Diego
- July 2023 - present **Research Scientist**, MosaicML, Databricks
- Aug. 2021 - July 2023 **Researcher**, Allen Institute for AI & University of Washington
- Jan. 2017 - July 2021 **Research Assistant**, Entertainment Intelligence Lab, Georgia Tech
- Jan. 2017 - July 2020 **Teaching Assistant**, Georgia Tech

Education

Georgia Institute of Technology

Atlanta, GA

PHD IN COMPUTER SCIENCE

2021

- GPA: 4.0
- Advisor: Professor Mark O. Riedl
- Thesis: Language Learning in Interactive Environments
- Thesis Committee: Drs. Mark Riedl, Devi Parikh, Charles Isbell, Matthew Hausknecht, Jason Weston
- Research Areas: Natural Language Processing, Reinforcement Learning, Interactive Narrative, Knowledge Graphs, and Computational Creativity

Georgia Institute of Technology

Atlanta, GA

BS IN COMPUTER SCIENCE

- GPA: 3.9, Dean's List
- Threads: Intelligence and Theory

Publications

CONFERENCES

- [1] Ximing Lu, Faeze Brahman, Peter West, Jaehun Jang, Khyathi Chandu, Abhilasha Ravichander, Lianhui Qin, Prithviraj Ammanabrolu, Liwei Jiang, Sahana Ramnath, Nouha Dziri, Jillian Fisher, Bill Yuchen Lin, Skyler Hallinan, Xiang Ren, Sean Welleck, and Yejin Choi. Inference-time policy adapters (ipa): Tailoring extreme-scale lms without fine-tuning. In *Empirical Methods in Natural Language Processing (EMNLP)*, 2023. URL: <https://arxiv.org/abs/2305.15065>.

- [2] Bill Yuchen Lin, Yicheng Fu, Karina Yang, Faeze Brahman, Shiyu Huang, Chandra Bhagavatula, Prithviraj Ammanabrolu, Yejin Choi, and Xiang Ren. Swiftsage: A generative agent with fast and slow thinking for complex interactive tasks. In *Thirty-seventh Conference on Neural Information Processing Systems (NeurIPS)*, 2023. URL: <https://arxiv.org/abs/2305.17390>.
- [3] Zeqiu Wu, Yushi Hu, Weijia Shi, Nouha Dziri, Alane Suhr, Prithviraj Ammanabrolu, Noah A. Smith, Mari Ostendorf, and Hannaneh Hajishirzi. Fine-grained human feedback gives better rewards for language model training. In *Thirty-seventh Conference on Neural Information Processing Systems (NeurIPS)*, 2023. URL: <https://arxiv.org/abs/2306.01693>.
- [4] Kolby Nottingham, Prithviraj Ammanabrolu, Alane Suhr, Yejin Choi, Hannaneh Hajishirzi, Sameer Singh, and Roy Fox. Do embodied agents dream of pixelated sheep: Embodied decision making using language guided world modelling. In *International Conference on Machine Learning (ICML)*, 2023. URL: <https://arxiv.org/abs/2301.12050>.
- [5] Rajkumar Ramamurthy*, Prithviraj Ammanabrolu*, Kianté Brantley, Jack Hessel, Rafet Sifa, Christian Bauckhage, Hannaneh Hajishirzi, and Yejin Choi. Is reinforcement learning (not) for natural language processing: Benchmarks, baselines, and building blocks for natural language policy optimization. In *International Conference on Learning Representations (ICLR)*, 2023. URL: <https://arxiv.org/abs/2210.01241>.
- [6] Youngjae Yu, Jiwan Chung, Heeseung Yun, Jack Hessel, JaeSung Park, Ximing Lu, Rowan Zellers, Prithviraj Ammanabrolu, Ronan Le Bras, Gunhee Kim, and Yejin Choi. Multimodal knowledge alignment with reinforcement learning. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023. URL: <https://arxiv.org/abs/2205.12630>.
- [7] Pei Zhou, Andrew Zhu, Jennifer Hu, Jay Pujara, Xiang Ren, Chris Callison-Burch, Yejin Choi, and Prithviraj Ammanabrolu. An ai dungeon master’s guide: Learning to converse and guide with intents and theory-of-mind in dungeons and dragons. In *Association for Computational Linguistics (ACL)*, 2023. URL: <https://arxiv.org/abs/2212.10060>.
- [8] Ruoyao Wang*, Peter Jansen*, Marc-Alexandre Côté, and Prithviraj Ammanabrolu. Behavior cloned transformers are neurosymbolic reasoners. In *European Chapter of the Association for Computational Linguistics (EACL)*, 2023. URL: <https://arxiv.org/abs/2210.07382>.
- [9] Ximing Lu, Sean Welleck, Liwei Jiang, Jack Hessel, Lianhui Qin, Peter West, Prithviraj Ammanabrolu, and Yejin Choi. Quark: Controllable text generation with reinforced unlearning. In *Thirty-sixth Conference on Neural Information Processing Systems (NeurIPS)*, 2022. URL: <https://arxiv.org/abs/2205.13636>.
- [10] Xiangyu Peng, Mark O Riedl, and Prithviraj Ammanabrolu. Inherently explainable reinforcement learning in natural language. In *Thirty-sixth Conference on Neural Information Processing Systems (NeurIPS)*, 2022. URL: <https://arxiv.org/abs/2112.08907>.
- [11] Ruoyao Wang*, Peter Jansen*, Marc-Alexandre Côté, and Prithviraj Ammanabrolu. Scienceworld: Is your agent smarter than a 5th grader? In *Empirical Methods in Natural Language Processing (EMNLP)*, 2022. URL: <https://arxiv.org/abs/2203.07540>.
- [12] Prithviraj Ammanabrolu, Liwei Jiang, Maarten Sap, Hannaneh Hajishirzi, and Yejin Choi. Aligning to social norms and values in interactive narratives. In *North American Chapter of the Association for Computational Linguistics (NAACL)*, 2022. URL: <https://arxiv.org/abs/2205.01975>.
- [13] Prithviraj Ammanabrolu, Renee Jia, and Mark O Riedl. Situated dialogue learning through procedural environment generation. In *Association for Computational Linguistics (ACL) 2022*, 2022. URL: <https://arxiv.org/abs/2110.03262>.

- [14] Prithviraj Ammanabrolu and Mark Riedl. Modeling worlds in text. In *Thirty-fifth Conference on Neural Information Processing Systems Datasets and Benchmarks Track (Round 1)*, 2021. URL: <https://openreview.net/forum?id=7FHnnENUG0>.
- [15] Prithviraj Ammanabrolu and Mark Riedl. Learning knowledge graph-based world models of textual environments. In *Thirty-fifth Conference on Neural Information Processing Systems*, 2021. URL: <https://arxiv.org/abs/2106.09608>.
- [16] Wai Man Si, Prithviraj Ammanabrolu, and Mark O Riedl. Telling stories through multi-user dialogue by modeling character relations. In *SIGDIAL 2021*, 2021. URL: <https://arxiv.org/abs/2105.15054>.
- [17] Prithviraj Ammanabrolu, Jack Urbanek, Margaret Li, Arthur Szlam, Tim Rocktäschel, and Jason Weston. How to motivate your dragon: Teaching goal-driven agents to speak and act in fantasy worlds. In *Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies*, pages 807–833, Online, June 2021. Association for Computational Linguistics. URL: <https://aclanthology.org/2021.naacl-main.64>, doi:10.18653/v1/2021.naacl-main.64.
- [18] Prithviraj Ammanabrolu, Wesley Cheung, William Broniec, and Mark O Riedl. Automated storytelling via causal, commonsense plot ordering. In *Thirty-Second AAAI Conference on Artificial Intelligence*, 2020. URL: <https://arxiv.org/abs/2009.00829>.
- [19] Prithviraj Ammanabrolu, Ethan Tien, Wesley Cheung, Zhaochen Luo, William Ma, Lara J. Martin, and Mark O. Riedl. Story realization: Expanding plot events into sentences. volume 34, pages 7375–7382, Apr. 2020. URL: <https://ojs.aaai.org/index.php/AAAI/article/view/6232>, doi:10.1609/aaai.v34i05.6232.
- [20] Matthew Hausknecht, Prithviraj Ammanabrolu, Marc-Alexandre Côté, and Xingdi Yuan. Interactive fiction games: A colossal adventure. In *Proceedings of the AAAI Conference on Artificial Intelligence*, volume 34, pages 7903–7910, 2020. URL: <https://arxiv.org/abs/1909.05398>.
- [21] Prithviraj Ammanabrolu, William Broniec, Alex Mueller, Jeremy Paul, and Mark O. Riedl. Toward automated quest generation in text-adventure games. In *International Conference on Computational Creativity (ICCC)*, 2020. URL: <https://arxiv.org/abs/1909.06283>.
- [22] Prithviraj Ammanabrolu, Wesley Cheung, Dan Tu, William Broniec, and Mark O Riedl. Bringing stories alive: Generating interactive fiction worlds. In *Proceedings of the Sixteenth AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE-20)*, 2020. URL: <https://www.aaai.org/ojs/index.php/AIIDE/article/view/7400>.
- [23] Prithviraj Ammanabrolu and Matthew Hausknecht. Graph constrained reinforcement learning for natural language action spaces. In *International Conference on Learning Representations*, 2020. URL: <https://openreview.net/forum?id=B1x6w0EtwH>.
- [24] Prithviraj Ammanabrolu and Mark Riedl. Playing text-adventure games with graph-based deep reinforcement learning. In *North American Chapter of the Association for Computational Linguistics (NAACL-HLT) 2019*, 2019. URL: <https://aclanthology.org/N19-1358/>.
- [25] Lara J Martin, Prithviraj Ammanabrolu, Xinyu Wang, William Hancock, Shruti Singh, Brent Harrison, and Mark O Riedl. Event representations for automated story generation with deep neural nets. In *Thirty-Second AAAI Conference on Artificial Intelligence*, pages 868–875, 2018. URL: <https://www.aaai.org/ocs/index.php/AAAI/AAAI18/paper/viewPDFInterstitial/17046/15769>.

JOURNALS

- [1] Zeqiu Wu, Ryu Parish, Hao Cheng, Sewon Min, Prithviraj Ammanabrolu, Mari Ostendorf, and Hannaneh Hajishirzi. Inscit: Information-seeking conversations with mixed-initiative interactions. *Transactions of the Association for Computational Linguistics (TACL)*, 2022. URL: <https://arxiv.org/abs/2207.00746>.

- [2] Prithviraj Ammanabrolu and Mark O Riedl. Situated language learning via interactive narratives. *Patterns, Cell Press*, 2021. URL: [https://www.cell.com/patterns/fulltext/S2666-3899\(21\)00159-8](https://www.cell.com/patterns/fulltext/S2666-3899(21)00159-8).

PEER REVIEWED WORKSHOPS

- [1] Lara J Martin, Prithviraj Ammanabrolu, Xinyu Wang, Shruti Singh, Brent Harrison, Murtaza Dhuliawala, Pradyumna Tambwekar, Animesh Mehta, Richa Arora, Nathan Dass, et al. Improvisational storytelling agents. In *Workshop on Machine Learning for Creativity and Design (NeurIPS 2017)*, page 4, 2017. URL: https://nips2017creativity.github.io/doc/Improvisational_Agents.pdf.
- [2] Prithviraj Ammanabrolu and Mark Riedl. Transfer in deep reinforcement learning using knowledge graphs. In *Proceedings of the Thirteenth Workshop on Graph-Based Methods for Natural Language Processing (TextGraphs-13) at EMNLP*, 2019. URL: <https://www.aclweb.org/anthology/D19-5301>.
- [3] Prithviraj Ammanabrolu, Ethan Tien, Wesley Cheung, Zhaochen Luo, William Ma, Lara Martin, and Mark Riedl. Guided neural language generation for automated storytelling. In *Proceedings of the Second Workshop on Storytelling*, pages 46–55, Florence, Italy, August 2019. Association for Computational Linguistics. URL: <https://www.aclweb.org/anthology/W19-3405>, doi:10.18653/v1/W19-3405.
- [4] Sahith Dambekodi, Spencer Frazier, Prithviraj Ammanabrolu, and Mark O Riedl. Playing text-based games with common sense. In *The Second WordPlay: When Language Meets Games Workshop at NeurIPS*, 2020. URL: <https://arxiv.org/abs/2012.02757>.
- [5] Prithviraj Ammanabrolu and Mark Riedl. Modeling worlds in text. In *The First Workshop on Common-sense Reasoning and Knowledge Bases (CSKB) at AKBC*, 2021. URL: <https://openreview.net/forum?id=7FHnnENUGO>.
- [6] Xiangyu Peng, Prithviraj Ammanabrolu, and Mark Riedl. Explainable reinforcement learning agents with stacked hierarchical graph attention. In *Workshop on Explainable Graph-based Machine Learning at AKBC*, 2021.
- [7] Rajkumar Ramamurthy*, Prithviraj Ammanabrolu*, Kianté Brantley, Jack Hessel, Rafet Sifa, Christian Bauckhage, Hannaneh Hajishirzi, and Yejin Choi. Is reinforcement learning (not) for natural language processing?: Benchmarks, baselines, and building blocks for natural language policy optimization. In *Second Workshop on Interactive Learning for Natural Language Processing (InterNLP) @ NeurIPS*, 2022. URL: <https://arxiv.org/abs/2210.01241>.
- [8] Bill Yuchen Lin, Yicheng Fu, Karina Yang, Prithviraj Ammanabrolu, Faeze Brahman, Shiyu Huang, Chandra Bhagavatula, Yejin Choi, and Xiang Ren. Swiftsage: A generative agent with fast and slow thinking for complex interactive tasks. In *Interactive Learning with Implicit Human Feedback (ILHF) @ ICML*, 2023. URL: <https://arxiv.org/abs/2305.17390>.

PRE-PRINTS

- [1] Christopher Zhang Cui, Xingdi Yuan, Zhang Xiao, Prithviraj Ammanabrolu, and Marc-Alexandre Côté. Tales: Text adventure learning environment suite. *arXiv preprint arXiv:2504.14128*, 2025. URL: <https://arxiv.org/abs/2504.14128>.
- [2] Junda Wu, Rohan Surana, Zhouhang Xie, Yiran Shen, Yu Xia, Tong Yu, Ryan A Rossi, Prithviraj Ammanabrolu, and Julian McAuley. In-context ranking preference optimization. *arXiv preprint arXiv:2504.15477*, 2025. URL: <https://arxiv.org/abs/2504.15477>.
- [3] Isadora White, Kolby Nottingham, Ayush Maniar, Max Robinson, Hansen Lillemark, Mehul Maheshwari, Lianhui Qin, and Prithviraj Ammanabrolu. Collaborating action by action: A multi-agent llm framework for embodied reasoning. *arXiv preprint arXiv:2504.17950*, 2025. URL: <https://arxiv.org/abs/2504.17950>.
- [4] Zachary Ankner, Mansheej Paul, Brandon Cui, Jonathan D Chang, and Prithviraj Ammanabrolu. Critique-out-loud reward models. *arXiv preprint arXiv:2408.11791*, 2024. URL: <https://arxiv.org/abs/2408.11791>.

- [5] Joel Jang, Seungone Kim, Bill Yuchen Lin, Yizhong Wang, Jack Hessel, Luke Zettlemoyer, Hannaneh Hajishirzi, Yejin Choi, and Prithviraj Ammanabrolu. Personalized soups: Personalized large language model alignment via post-hoc parameter merging. *arXiv preprint arXiv:2310.11564*, 2023. URL: <https://arxiv.org/abs/2310.11564>.
- [6] Nikita Haduong, Irene Wang, Bo-Ru Lu, Prithviraj Ammanabrolu, and Noah A Smith. Cps-taskforge: Generating collaborative problem solving environments for diverse communication tasks. *arXiv preprint arXiv:2408.08853*, 2024. URL: <https://arxiv.org/abs/2408.08853>.
- [7] Zhouhang Xie, Junda Wu, Yiran Shen, Yu Xia, Xintong Li, Aaron Chang, Ryan Rossi, Sachin Kumar, Bodhisattwa Prasad Majumder, Jingbo Shang, et al. A survey on personalized and pluralistic preference alignment in large language models. *arXiv preprint arXiv:2504.07070*, 2025. URL: <https://arxiv.org/abs/2504.07070>.
- [8] Prithviraj Ammanabrolu, Ethan Tien, Matthew Hausknecht, and Mark O Riedl. How to avoid being eaten by a grue: Structured exploration strategies for textual worlds. *arXiv preprint arXiv:2006.07409*, 2020. URL: <https://arxiv.org/abs/2006.07409>.

PATENTS

- [1] Gautam Singaraju and Prithviraj Ammanabrolu. Techniques for building a knowledge graph in limited knowledge domains, April 11 2023. US Patent 11,625,620.

Teaching Experience

Apr. 2025 - Jul. 2025	Introduction to Deep Reinforcement Learning (Undergraduate Level) , Instructor	University of California, San Diego
Jan. 2024 - Apr. 2024	AI Agents (Graduate Level) , Instructor	University of California, San Diego
Sept. 2024 - Dec. 2024	Seminar on Large Language Models (Graduate Level) , Instructor	University of California, San Diego
Mar. 2022 - Jun. 2022	CSE 473: Introduction to AI (Graduate Level) , Guest Instructor	University of Washington
Jan. 2019 - May 2021	Game AI (Graduate Level) , Guest Instructor	Georgia Tech
Jan. 2017 - Aug. 2020	CS 3600: Introduction to AI (Undergraduate Level) , Teaching Assistant	Georgia Tech

Mentoring

2024 - Curr. **Isadora White**, PhD Student, University of California, San Diego
2024 - Curr. **Ruiyi Wang**, PhD Student, University of California, San Diego
2024 - Curr. **Christopher Cui**, PhD Student, University of California, San Diego
2024 - Curr. **Bosung Kim**, PhD Student, University of California, San Diego
2024 - Curr. **Yiran (Jenny) Shen**, PhD Student, University of California, San Diego
2024 - Curr. **Zachary Ankner**, BS Student, Massachusetts Institute of Technology
2020 - 2024 **Xiangyu (Becky) Peng**, PhD Student, Georgia Institute of Technology
2021 - 2024 **Ellen (Zequi) Wu**, PhD Student, University of Washington
2022 - 2024 **Rajkumar Ramamurthy**, PhD Student, IAIS Fraunhofer
2023 - 2024 **Joel Jang**, PhD Student, University of Washington
2023 - 2024 **Kolby Nottingham**, PhD Student, University of California, Irvine
2022 - 2023 **Yushi Hu**, PhD Student, University of Washington
2022 - 2023 **Yuchen (Bill) Lin**, PhD Student, University of Southern California
2022 - 2023 **Jennifer Hu**, PhD Student, Massachusetts Institute of Technology
2022 - 2023 **Pei Zhou**, PhD Student, University of Southern California
2021 - 2023 **Ruoyao Wang**, PhD Student, University of Arizona
2021 - 2022 **Liwei Jiang**, PhD Student, University of Washington
2020 - 2021 **Dan Tu**, PhD Student, Georgia Institute of Technology
2019 - 2021 **Ran (Renee) Jia**, MS Student, Georgia Institute of Technology
2019 - 2021 **Wai Man (Raymond) Si**, MS Student, Georgia Institute of Technology, Now: PhD Student at Max Planck/Helmholtz Institute
2019 - 2021 **Sahith Dambekodi**, MS Student, Georgia Institute of Technology
2020 - 2021 **Winston Li**, MS Student, Georgia Institute of Technology
2019 - 2021 **William Broniec**, MS Student, Georgia Institute of Technology
2018 - 2021 **Ethan Tien**, MS Student, Georgia Institute of Technology,
2018 - 2021 **Wesley Cheung**, MS Student, Georgia Institute of Technology, Now: Software Engineer at Facebook
2018 - 2021 **William Ma**, MS Student, Georgia Institute of Technology, Now: Software Engineer at Amazon
2021 - Curr. **Deepti Ramani**, BS Student, University of Washington
2021 - Curr. **Ximing Lu**, Pre-doc, Allen Institute for AI
2022 - Curr. **Ravi Ghadia**, Now: GPU Architect at Nvidia
2018 - 2020 **Jeffery Luo**, BS Student, Georgia Institute of Technology, Now: Research Analyst at Goldman Sachs
2018 - 2020 **Alejandro Escontrela**, BS Student, Georgia Institute of Technology, Now: Research Engineer at Google Brain
2018 - 2020 **Anush Mattapalli**, BS Student, Georgia Institute of Technology, Now: Software Engineer at NCR Corporation

Additional Professional Experience

Summer 2020 **Research Intern**, Facebook AI Research
Summer 2019 **Research Intern**, Microsoft Research
Summer 2018 **Research Intern**, Oracle Intelligent Bots
Summer 2017 **Research Intern**, Radix Health

Research Experience

University of California, San Diego

San Diego, CA

July 2024 - Present

- Tenure-track Assistant Professor and Director of the [PEARLS](#) Lab in the Department of Computer Science and Engineering focused on interactive and grounded language learning.
- Teach courses at the upper undergraduate and graduate levels and mentor PhD students towards research in Machine Learning, Reinforcement Learning, and Natural Language Processing.

MosaicML, Databricks

San Diego, CA

July 2023 - Present

- **Part of 30-person MosaicML Startup research team that was acquired by Databricks for \$1.3 Billion.**
- Building agents that align to human's preferences through feedback in deployment.

Mosaic Team, Allen Institute for AI

Seattle, WA

Aug. 2021 - July 2023

MANAGERS: PROF. YEJIN CHOI, PROF. HANNANEH HAJISHIRZI

- Building agents that align to human's preferences through feedback.
- Creating world models for agents to learn from environmental observation.
- **Taught as Guest Instructor and mentored 10 Master's and Ph.D. students at the University of Washington**

Entertainment Intelligence Lab, Georgia Tech

Atlanta, GA

Jan 2017 - July 2021

ADVISOR: PROF. MARK RIEDL

- Exploring the use of deep reinforcement learning with natural language state and action spaces
- Using knowledge graphs to inject domain knowledge into language-based tasks such as automated story generation and procedural content generation
- **Mentored 10 Bachelor's and Master's students** on their research theses

Facebook AI Research

New York City, NYC

May 2020 - Aug. 2020

ADVISORS: JASON WESTON, PROF. TIM ROCKTÄSCHEL, ARTHUR SZLAM

- Worked on the ParlAI team and LIGHT, a large-scale crowdsourced text-game
- Collected and released datasets **crowdsourced by over 15,000 players** of natural language quests in LIGHT and a common-sense knowledge graph ATOMIC-LIGHT
- Developed goal-driven questing agents with reinforcement learning that act and speak in LIGHT

Microsoft Research

Redmond, WA

May 2019 - Aug. 2019

ADVISOR: MATTHEW HAUSKNECHT

- Worked on the Reinforcement Learning team and aided in development of baseline text-game playing agents for Jericho, a text-game playing platform
- Developed **SOTA RL algorithm that is able to dynamically generate language** in text-games

Oracle Inc.

Redwood City, CA

May 2018 - Aug. 2018

INTELLIGENT BOTS SERVICE

- Developed a **patented algorithm to create knowledge graphs** for low resource natural language datasets
- Created a method that improves the natural language understanding capabilities by over 10% (classification rate) of the chatbot platform using the generated graph and graph embedding techniques

Radix Health

Atlanta, GA

May 2017 - May 2018

MANAGERS: ARUN MOHAN, ANUP LAKARE, RAVINDRA JORE

- Used predictive analytics techniques to model patients' no-show risks for healthcare clinics
- Used natural language processing to design a chatbot to improve patient access by triaging diagnostics
- Built and deployed machine learning systems for these cases from scratch to production, currently **used by over 40 clinics and over a 1,000 doctors** across America
- **Acquired/merged with Relatient for \$100 Million**

Skills

TECHNICAL

- Natural Language Processing, Reinforcement Learning, Machine Learning, Knowledge Graphs, Semantic Web Technologies, Computer Vision, Predictive Analytics, Agile Methodologies, NoSQL

PROGRAMMING LANGUAGES

- Python, R, Java, C/C++, C#, SQL, SPARQL

FRAMEWORKS AND TOOLS

- pyTorch, scikit-learn, Tensorflow, nltk, AutoML, Couchbase, MongoDB, Spring Boot, Unity Engine

LANGUAGES

- English, Telugu, Sanskrit, Tamil, Hindi

Professional Activities

ORGANIZER

- 2024 **Wordplay When Language Meets Games, NAACL 2024**
<https://wordplay-workshop.github.io/>
- 2023 **Creative AI Across Modalities, AAAI 2023** <https://creativeai-ws.github.io/>
- 2022 **Wordplay When Language Meets Games, NAACL 2022**
<https://wordplay-workshop.github.io/wordplay2022/>
- 2020 **Wordplay When Language Meets Games, NeurIPS 2020**
<https://wordplay-workshop.github.io/wordplay2020/>

PHD THESIS COMMITTEES SERVED

- 2025 **Junda Wu**, UC San Diego
- 2025 **Zijian He**, UC San Diego
- 2025 **Ruipeng Zhang**, UC San Diego
- 2024 **Yu Wang**, UC San Diego
- 2024 **Ruoyao Wang**, University of Arizona
- 2023 **Xiangyu Peng**, Georgia Institute of Technology

PROGRAM COMMITTEE REVIEWER / (SENIOR) AREA CHAIR

- Aug. 2018 - **Conferences, Journals, and Workshops,**
- Present
 - Transactions on Machine Learning Research (TMLR) 2022, 2023, 2024
 - Neural Information Processing Systems (NeurIPS) 2019, 2020, 2021, 2022, 2023, 2025
 - Meeting of the Association for Computational Linguistics (ACL) 2020-4
 - ACL Rolling Review 2020-4
 - North American Chapter of the Meeting of the Association for Computational Linguistics (NAACL) 2019, 2021, 2024
 - AAAI Conference on Artificial Intelligence (AAAI) 2019, 2020, 2021
 - International Conference on Machine Learning (ICML) 2020-5
 - International Conference on Learning Representations (ICLR) 2020-5
 - Empirical Methods in Natural Language Processing (EMNLP) 2020-25
 - ACM CSUR Computing Surveys
 - Interactive Learning for Natural Language Processing (InterNLP) at NeurIPS2022
 - TextGraphs Workshop at EMNLP 2020
 - Language and Reinforcement Learning Workshop (LaReL) at ICML2020
 - Workshop on Learning in Artificial Open Worlds (LAOW) at ICML 2020

SERVICE AND OUTREACH

- July, 2023 - **Institutional Service, UC San Diego** *San Diego, CA*
- Undergraduate Curriculum Committee, responsible for changing the UCSD CSE Dept's undergrad curriculum
 - PhD committee service, served on the committees of multiple PhD students
- Aug. 2018 - **Institutional Service, Georgia Institute of Technology** *Atlanta, GA*
- Jul. 2021
- Reviewer for President's Undergraduate Research Awards (PURA) 2019
 - Co-founder of the MCV PhD Student Support Group 2018-2020
 - School of Computer Science's Prospective Student Visit Week, Coordinator 2019
 - School of Interactive Computing's Prospective Student Visit Week, Volunteer 2019, 2020

EXTRACURRICULARS

- Aug. 2015 - **Hackathons and Video Game Development,**
- July 2018
- HackIllinois: Health Desk - Desktop app that checks posture using computer vision
 - SwampHacks: Labyrinth - 3D survival maze game built with Unity engine and C#; top 10 overall
 - HackGT: CorCal - App to sync multiple calendars; built with Java and the Swing library
 - Video Game Development Club (VG Dev) at Georgia Tech: HowRogue C++ Roguelike

Selected Media Coverage

- Databricks Has a Trick That Lets AI Models Improve Themselves Wired. Will Knight. March 25, 2025. [LINK](#).
- Inside the Creation of the World's Most Powerful Open Source AI Model Wired. Will Knight. March 27, 2024. [LINK](#).
- How role-playing a dragon can teach an AI to manipulate and persuade MIT Tech Review. Will Douglas Heaven. November 20, 2020. [LINK](#).
- How to Train Your AI: Researchers Teach AI How to Move Around Fantasy Worlds Science Times. Mark B. November 5, 2020. [LINK](#).
- AI can make your favourite game characters speak to each other INDIAai National AI Portal of India. November 5, 2020. [LINK](#).
- Teaching AI agents to communicate and act in fantasy worlds Tech Xplore. Ingrid Fadelli, November 3, 2020. [LINK](#).
- Researchers combine reinforcement learning and NLP to escape a Grue monster Venture Beat. Khari Johnson, June 30, 2020. [LINK](#).
- Sztuczna inteligencja jako pisarz: Generowanie fabuły (Translation from Polish: Artificial Intelligence as a Writer: Story Generation) Zeszyty Maryny. Patrycja Świeszkowska, Oct 4, 2019. [LINK](#).
- Georgia Tech Artificial Intelligence Research Includes Collaborative Approaches with Humans, Automating Content, and More Georgia Tech GVU Center. Joshua Preston, Feb 2, 2018. [LINK](#).
- Changing the Conversation: Georgia Tech Researchers Provide New Approach to Automated Story Generation Georgia Tech School of Interactive Computing. David Mitchell, Feb 4, 2020. [LINK](#).