

# John Murzaku

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## WORK EXPERIENCE

**Applied Scientist** | Adobe (Agent Orchestrator Team)  
*San Jose, CA*

May 2025 — Present

- Leading planning agent development for multi-agent orchestration system.
- Designed and shipped plan retrieval, disambiguation, and customization features.
- Built and deployed automated evaluation framework for Agent Orchestrator.

**Applied Scientist Intern** | Adobe

May — Nov. 2024

*San Jose, CA* | Mentors: [Zifan Liu](#), [Yunyao Li](#)

- Built enhanced ambiguity detection and clarification system for Adobe's AI Assistant.
- Reduced missed essential clarification questions by 9% in production.
- First author of 2 papers (IAAI, AAI) and patent application.
- Collaborated with UI/UX to integrate interactive disambiguation interface.

**NLP Research Intern** | Raytheon

May — Aug. 2023

*Cambridge, MA*

- Improved authorship attribution system for IARPA HIATUS program.
- Integrated topic-model features, increasing production recall@8 by 3%.
- Experimented with synthetic data generation using LLaMA-2.

## EDUCATION

**Stony Brook University**

Jan 2021 - May 2025

Ph.D. in Computer Science; GPA: 3.89/4.0; Advisor: [Owen Rambow](#).

**Seton Hall University**

Aug 2017 - Dec 2020

B.S. in Mathematics; GPA: 3.83/4.0.

## PUBLICATIONS (SELECTED)

1. **John Murzaku**, Owen Rambow. "OmniVox: Zero-Shot Emotion Recognition with Omni-LLMs". Submitting to ARR Oct 2025. [PDF](#)
2. **John Murzaku**, Owen Rambow. "Zero-Shot Belief: A Hard Problem for LLMs". CODI 2025 (co-located at EMNLP 2025). [PDF](#)
3. **John Murzaku**, Zifan Liu, Vaishnavi Muppala, Mehrab Tanjim, Xiang Chen, Yunyao Li. "ECLAIR: Enhanced Clarification for Interactive Responses in an Enterprise AI Assistant". AAI 2025 Demo Track.
4. **John Murzaku**, Zifan Liu, Mehrab Tanjim, Vaishnavi Muppala, Xiang Chen, Yunyao Li. "ECLAIR: Enhanced Clarification for Interactive Responses". IAAI 2025. 15.7% acceptance rate. [PDF](#)
5. Adil Soubki\*, **John Murzaku**\*, Peter Zeng, Owen Rambow. (\* equal contrib) "Synthetic Audio Helps for Cognitive State Tasks". Findings of NAACL 2025. [PDF](#)
6. Amie Paige\*, Adil Soubki\*, **John Murzaku**\*, Owen Rambow, Susan Brennan. (\* equal contrib) "Training LLMs to Recognize Hedges in Spontaneous Narratives". SIGDIAL 2024. [PDF](#)
7. Adil Soubki, **John Murzaku**, Arash Yousefi Jordehi, Peter Zeng, Magdalena Markowska, Seyed A. Mirroshandel, Owen Rambow. "Views Are My Own, but Also Yours: Benchmarking Theory of Mind Using Common Ground". Findings of ACL 2024. [PDF](#)
8. **John Murzaku**\*, Adil Soubki\*, Owen Rambow. (\* equal contrib) "Multimodal Belief Prediction". Interspeech 2024. [PDF](#)
9. **John Murzaku**, Owen Rambow. "BeLeaf: Belief Prediction as Tree Generation". NAACL 2024 Demo. [PDF](#)
10. **John Murzaku**, Tyler Osborne, Amittai Aviram, Owen Rambow. "Towards Generative Event Factuality Prediction". Findings of ACL 2023. [PDF](#)
11. **John Murzaku**, Peter Zeng, Magdalena Markowska, Owen Rambow. "Re-Examining Factbank: Predicting the Author's Presentation of Factuality". COLING 2022. [PDF](#)

## SKILLS

**Programming:** Python; Bash

**ML/LLM:** PyTorch; Transformers; agents-sdk; tool/function use; multi-agent orchestration; evaluation harnesses

**NLP Focus:** event detection; belief modeling; theory of mind; hedging; attribution

**Tools:** Git; Linux; Docker; Databricks