Saaket Agashe

Ph.D. Student, UC Santa Barbara (CMPSC)

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Research Interests

(Multimodal) Large Language Models, AI Agents, Natural Language Processing, Reinforcement Learning.

Education

Sept '25 Present	**Ph.D. Computer Science** UC Santa Barbara. PI: Xin Eric Wang	**Transferred to UC Santa Barbara**
Jan '24 Aug '25	**Ph.D. Computer Science and Engineering** UC Santa Cruz	**3.97/4**
Sept '21 Dec '23	**M.S Computer Science and Engineering** UC Santa Cruz	**3.96/4**
Aug '16 June '20	**B.Tech Electronics Engineering** VJTI, Mumbai	**8.2/10**

Publications

P=Preprint, C=Conference, W=Workshop

[C.1] **Agent S2: A Compositional Generalist–Specialist Framework for Computer Use Agents**
Saaket Agashe, Kyle Wong, Vincent Tu, Jiachen Yang, Ang Li, Xin Eric Wang
COLM '25 *Also on arXiv: arXiv:2504.00906*

[P.1] **Self-Resource Allocation in Multi-Agent LLM Systems**
Alfonso Amayuelas, Jingbo Yang, **Saaket Agashe**, Ashwin Nagarajan, Antonis Antoniades, Xin Eric Wang, William Wang
Preprint *arXiv: 2504.02051*

[C.2] **Agent S: An Open Agentic Framework that Uses Computers Like a Human**
Saaket Agashe, Jiuzhou Han, Shuyu Gan, Jiachen Yang, Ang Li, Xin Eric Wang
ICLR '25 *Also on arXiv: 2410.08164*

[C.3] **LLM-Coordination: Evaluating and Analyzing Multi-agent Coordination Abilities in Large Language Models**
Saaket Agashe, Yue Fan, Anthony Reyna, Xin Eric Wang
Findings of NAACL '25 *ACL Anthology PDF: link*

[C.4] **Interacting with Next-Phrase Suggestions: How Suggestion Systems Aid and Influence the Cognitive Processes of Writing**
Advait Bhat, **Saaket Agashe**, Niharika Mohile, Parth Oberoi, Ravi Jangir, Anirudha Joshi
IUI '23 *Proceedings of the 28th International Conference on Intelligent User Interfaces* (Honorable Mention)

[C.5] **Athena 3.0: Personalized multimodal chatbot with neuro-symbolic dialogue generators**
Team Athena, UCSC
SGC '23 *Alexa Prize Socialbot Grand Challenge*

[W.1] **How do People Interact with Biased Text Prediction Models while Writing?**
Advait Bhat, **Saaket Agashe**, Anirudha Joshi
EACL '21 *First Workshop on Bridging Human–Computer Interaction and Natural Language Processing; PDF: link*

Academic Service

Reviewer NeurIPS '25, COLM '25, ICLR '25, EMNLP '24

Experience

June '25 – Sept '25 | **Cisco Research** | **San Jose, CA**

Research Intern | Supervisor: Jayanth Srinivasa

- Developed Co-Learning: A Reinforcement Learning framework for Multi-turn Reasoning Agents (Ongoing project.).
- Co-created Project Morpheus: A skill-acquisition method that enables computer use agents to observe GUI demonstrations and tranlsate the skill to a robust sequence of API calls. The project was selected as a top 25 submission to the Cisco MCP hackathon out of 200+ teams and 1000+ participants.

July '24 – June '25 | **Simular** | **San Mateo, CA**

Research Intern | Supervisor: Ang Li

- Developed **Agent S** (8000+ GitHub stars) and the subsequent **Agent S2**, achieving SOTA performance over prior methods in OSWorld, WindowsAgentArena, and AndroidWorld. Agent S was accepted at ICLR '25 [Publication] and Agent S2 was accepted at COLM '25 [Publication].
- Enhanced domain knowledge in MLLM agents for GUI control through experience-augmented hierarchical planning and web search.
- Proposed an agent-computer interface to improve MLLM agents' adaptation to human-designed UIs.
- Implemented the Mixture of Grounding solution which combined specialist agents for various computer grounding needs.

June '23 – Sept '23 | **UC Santa Cruz** | **Santa Cruz, CA**

Graduate Student Researcher | Advisor: Xin Eric Wang

- Developed the **LLM-Coordination Benchmark** for evaluating LLMs in pure coordination tasks, accepted at Findings of NAACL '25 [Publication].
- Demonstrated strong environment comprehension and zero-shot coordination in LLMs, identifying growth areas in theory-of-mind reasoning.
- Created the CoordinationQA dataset for analyzing LLMs in coordination tasks, focusing on theory of mind, environment comprehension, and joint planning.

Sept '20 – June '21 | **Cygnus AI** | **Remote**

Machine Learning Intern | Supervisor: Atul Tatke

- Developed an LSTM-based medical term tagger in PyTorch, automating clinical record annotation with over 90% accuracy.
- Curated and prepared high-quality training datasets, improving model robustness and adaptability.
- Implemented sequence labeling model that streamlined the annotation workflow and reduced manual effort.

Awards and Achievements

Best Paper award at Agentic AI for Science Workshop, ICLR'25 Received the best paper recognition for "Agent S: An Open Agentic Framework that Uses Computers Like a Human"

Runner-Up: Alexa Prize SocialBot Grand Challenge 5 Achieved runner-up position in the Scientific Innovation Category among 10+ teams.

Best Paper Honorable mention award at IUI'23 Received an honorable mention best paper recognition for "Interacting with Next-Phrase Suggestions: How Suggestion Systems Aid and Influence the Cognitive Processes of Writing"

Winner: Artificial Intelligence Hackathon, Tata Motors 2019 Awarded for developing a Speaker Diarization and Speech Emotion Recognition system for Customer Interaction Data.

Semi-Finalist: ABU National Robocon 2018 Recognized for developing an autonomous robotic system for Robocon '18.

Technical Skills

Programming Languages: Python, JavaScript, C, HTML/CSS, SQL

AI/ML Tools: PyTorch, Transformers, RLlib, Scikit-learn, Numpy, Pandas, Spacy, NLTK, VERL, Verifiers, TRL, Ray

Frameworks/Tools: React, Docker, Git, MongoDB, Tableau