hsahijw@emory.edu
cs.emory.edu/ hsahijw/
harshita-sahijwani
harshita-rygbee
Google Scholar: Harshita Sahijwani

Harshita Sahijwani

Education

Aug'17 – exp. May'24 **Ph.D. in Computer Science and Informatics**, Emory University, Atlanta, USA
Thesis: "Intent Prediction and User Modeling for Conversational Search and Recommendation"
Advisor: Eugene Agichtein

Aug'13 – May'17 **B. Tech in Information and Communication Technology**,
DA-IICT, Gandhinagar, India

Research Expertise

Dialog Systems, *Introduced novel methods for intent prediction [5], topic recommendation [3], and news presentation [2]*

Information Retrieval, *Experience working with large-scale web search systems, including implementing intent prediction and query classification methods for e-commerce and healthcare search*

Natural Language Processing, *Experience training and fine-tuning language models [1] and employing core NLP techniques like semantic parsing, NER, and LDA topic modeling*

Research Experience

Sep'22 – present **Intent Classification for Health-Related Web Search Queries**,
in collaboration with Kaiser Permanente, under supervision of Eugene Agichtein

Currently working on intent classification for health-related search queries

- Incorporated domain-specific external knowledge into language models to improve intent classification

Aug'20 – May'22 **Contextual Response Interpretation in Structured Interviews**,
in collaboration with Procter & Gamble, under supervision of Eugene Agichtein

- Performed a user study (125 participants) to analyze the effectiveness of conversational systems for conducting market research interviews
- Introduced methods for matching conversational user responses to predetermined answer options [1]

May'18 – Aug'20 **Search and Recommendation in Open-Domain Social Bots**,
as part of the Alexa Prize Challenge, under supervision of Eugene Agichtein and Jinho Choi [4,6]

- Proposed and implemented entity linking and representation components for entity-aware conversational topic classification [5]
- Introduced contextual topic recommendation methods for open-domain socialbots [3]
- Developed a module that answers news-related queries and recommends news. Conducted a large-scale user study (2500 participants) to compare different presentations of news recommendations [2]

Industry Experience

Jun'22 – Sep'22 **Amazon, Alexa Shopping**, *Applied Scientist Intern*, Seattle, WA,
"Identifying subjective e-commerce queries and analyzing user behavior on them"

- Introduced classification models for identifying subjective queries using a combination of text embeddings and user behavior features. The best model had 70% F1 score
- Defined a taxonomy for subjective queries in e-commerce

May'21 – Aug'21 **Procter & Gamble, Data Science & AI**, *Data Science Intern*, Mason, OH (Remote),
"Generating clarification questions for a conversational question-answering system"

- Introduced a method for few-shot question generation using crowd-sourced reading comprehension data. The model showed 7% improvement in coherence over the baseline

May'20 – Aug'20 **Microsoft, Conversational Search Team**, *Research Intern*, Bellevue, WA (Remote),
"Clarifying search intent for ambiguous queries on Bing"

- Augmented the ranking model used in production with features based on top search results to improve query suggestion
- The model outperformed the baseline ranking model that did not use features from top search results in a simulated experiment and human evaluation task

May'19 – Aug'19 **Microsoft, Conversational Search Team**, *Research Intern*, Bellevue, WA,
"Recommending relevant follow-up queries to a Bing user for a query about a complex task"

- Developed an unsupervised model to identify relevant follow-up topics from top search results. Human evaluators classified ∼95% queries identified by the model as 'reasonable' or 'good'

May'16 – Aug'16 **Enago Read**, *Software Development Intern*, Gujarat, India,
Scientific Literature Recommendation

Implemented a recommender system for scientific literature using LDA topic modeling features

Publications

[1] **Harshita Sahijwani**, Kaustubh Dhole, Ankur Purwar, Venugopal Vasudevan, and Eugene Agichtein, *"Contextual Response Interpretation for Automated Structured Interviews: A Case Study in Market Research"* WWW Companion Proceedings, ACM, 2023

[2] **Harshita Sahijwani**, Jason Choi and Eugene Agichtein, *"Would You Like to Hear the News? Investigating Voice-Based Suggestions for Conversational News Recommendation"* CHIIR, ACM, 2020

[3] Ali Ahmadvand, **Harshita Sahijwani**, and Eugene Agichtein, *"Would you Like to Talk about Sports Now? Towards Contextual Topic Suggestion for Open-Domain Conversational Agents"* CHIIR, ACM, 2020

[4] Sarah Finch, James Finch, Ali Ahmadvand, Ingyu Choi, Xian Dong, Ruixiang Qi, **Harshita Sahijwani**, Sergey Volokhin, Zihan Wang, Zihao Wang, Jinho Choi, *"Emora: An Inquisitive Social Chatbot Who Cares For You"* Alexa Prize Proceedings, Amazon, 2020

[5] Ali Ahmadvand, **Harshita Sahijwani**, Jason Choi and Eugene Agichtein, *"ConCET: Entity-aware topic classification for open-domain conversational agents"* CIKM, ACM, 2019

[6] Ali Ahmadvand, Jason Choi, **Harshita Sahijwani**, Justus Schmidt, Mingyang Sun, Sergey Volokhin, Zihao Wang, and Eugene Agichtein, *"Emory IrisBot: An Open-Domain Conversational Bot for Personalized Information Access"* Alexa Prize Proceedings, Amazon, 2018

[7] Gaurav Maheshwari, Priyansh Trivedi, **Harshita Sahijwani**, Kunal Jha, Sourish Dasgupta, and Jens Lehmann, *"SimDoc: Topic Sequence Alignment based Document Similarity Framework"* K-CAP, ACM, 2017

Awards

2020 **Amazon Alexa Prize 3**, Our team won and was awarded $500,000 for advancing through two elimination rounds based on user ratings and then receiving the highest overall rating from the panel of final judges

2019 **CIKM Travel Grant**, Was awarded a $1000 grant to present a paper at the 2019 CIKM Conference in Beijing

Teaching

Intelligent Assistants, *Emory University*, Teaching Assistant, Spring 2019

Introduction to Computer Science, *Emory University*, Teaching Assistant, Fall 2018

Data Structures and Algorithms, *Emory University*, Teaching Assistant, Spring 2018

Basic Electronic Circuits, *DA-IICT*, Teaching Assistant, Fall 2016

Professional Service

2022 **Program Committee Member**, *CIKM*

2021 **Program Committee Member**, *CIKM*

2020 **Program Committee Member**, *CIKM*

2020 **Mentor**, *Athena Pathways Mentorship Program*

Technical Skills

- **Languages**
  Proficient in Python, Java; Significant experience in C, C++; Some experience in Bash, SQL, JavaScript, HTML/CSS
- **Tools & Technologies**
  Transformers, PyTorch, Git, Elasticsearch, Scikit-learn, Pandas, DynamoDB, AWS, Azure