Faeze Brahman

POSTDOCTORAL RESEARCHER · COMPUTER SCIENCE · AI2 | UNIVERSITY OF WASHINGTON

✉ faezeb@allenai.org | ⌂ www.faeze.ml | 🐦 @faeze_brh

Research Interests

Natural Language Understanding and Generation, Machine Learning, Artificial Intelligence, (Social) Commonsense Reasoning, Explainable AI

Professional Experience

Postdoctoral Researcher   *04/2022-present*
ALLEN ALLEN INSTITUTE FOR ARTIFICIAL INTELLIGENCE (AI2) & UNIVERSITY OF WASHINGTON
- Mentor: Yejin Choi

Research Intern   *06/2021-09/2021*
MICROSOFT RESEARCH - DEEP LEARNING GROUP
- Hosts: Michel Galley, Jianfeng Gao
- Project: Controllable Grounded Long-Form Text Generation

Research Intern   *06/2020-09/2020*
ALLEN ALLEN INSTITUTE FOR ARTIFICIAL INTELLIGENCE (AI2) - MOSAIC GROUP
- Hosts: Vered Shwartz, Yejin Choi
- Project: Distant Supervision Methods for Explainable AI

Research Intern   *06/2018-09/2018*
XEROX PARC - INTERACTION & ANALYTIC LAB (IAL)
- Host: Kyle Dent
- Project: RFP Response Assistant System using Semantic Contextualized vectors for retrieval.

AMI and Telecommunication Expert   *01/2015-06/2016*
MONENCO CONSULTING ENGINEERS (TEHRAN, IRAN)

Researcher   *08/2014-12/2014*
NIROO RESEARCH INSTITUTE (TEHRAN, IRAN)

Education

University of California, Santa Cruz   *Santa Cruz, CA*
PHD IN COMPUTER SCIENCE (GPA: 3.87)   *2022*
- Thesis: Modeling Key Narrative Elements for Automatic Story Generation
- Advisor: Snigdha Chaturvedi

MS IN COMPUTER SCIENCE (GPA: 3.87)   *2018*
- Advisor: Marilyn Walker

Iran University of Science and Technology   *Tehran, Iran*
MS IN ELECTRICAL ENGINEERING (GPA: 3.91)   *2014*
- Thesis: Electrical and Thermal Energy Management of Residential Energy Hubs
- Advisor: Shahram Jadid

BS IN ELECTRICAL ENGINEERING (GPA: 3.54)   *2012*
- Graduated as Outstanding Student

Awards

2021	**Sabbatical Dissertation Fellowship**, Jack Baskin School of Engineering, UC Santa Cruz

2020	**GHC Scholarship**, AnitaB.org
	Tapia Celebration of Diversity Scholarship, CMDiT

2019	**GHC Student Scholarship**, AnitaB.org
	Women's Club Scholarship, UC Santa Cruz
	Marilyn C. Davis Scholarship, UC Santa Cruz
	Second Best Poster Award, UCSC Data Science's Day
	CRA-W Travel Grant, Computing Reseach Association (CRA)

2016	**Regents Fellowship**, UC Santa Cruz

2012	**Full Scholarship for graduate study**, Iran University of Science and Technology

2008	**Full Scholarship for undergraduate study**, Iran University of Science and Technology

Publications

PREPRINT AND IN SUBMISSION

PlaSma: Making Small Language Models Better Procedural Knowledge Models for (Counterfactual) Planning
Faeze Brahman, Chandra Bhagavatula, Valentina Pyatkin*, Jena D. Hwang*, Xiang Lorraine Li, Hirona J. Arai, Soumya Sanyal, Keisuke Sakaguchi, Xiang Ren, Yejin Choi. *Under review*

Inference-Time Policy Adapters (IPA): Tailoring Extreme-Scale LMs without Fine-tuning
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, Yejin Choi. *Under review*

Improving Language Models with Advantage-based Offline Policy Gradients
Ashutosh Baheti, Ximing Lu, *Faeze Brahman*, Ronan Le Bras, Maarten Sap, Mark Riedl. *Under review*

Impossible Distillation: from Low-Quality Model to High-Quality Dataset & Model for Summarization and Paraphrasing
Jaehun Jung, Peter West, Liwei Jiang, *Faeze Brahman*, Ximing Lu, Jillian Fisher, Taylor Sorensen, Yejin Choi. *Under review*

SwiftSage: A Generative Agent with Fast and Slow Thinking for Complex Interactive Tasks
Bill Yuchen Lin, Yicheng Fu, Karina Yang, Prithviraj Ammanabrolu, *Faeze Brahman*, Shiyu Huang, Chandra Bhagavatula, Yejin Choi, Xiang Ren.

JOURNAL AND PEER-REVIEWED CONFERENCE PAPERS

REV: Information-Theoretic Evaluation of Free-Text Rationales
Hanjie Chen, *Faeze Brahman*, Xiang Ren, Yangfeng Ji, Yejin Choi, Swabha Swayamdipta. *@ ACL 2023*

Generating Sequences by Learning to [Self-]Correct
Sean Welleck*, Ximing Lu*, Peter West+, Faeze Brahman+, Tianxiao Shen, Daniel Khashabi, Yejin Choi. *@ ICLR 2023*
* : co-first authors, + co-second authors

Maieutic Prompting: Logically Consistent Reasoning with Recursive Explanations
Jaehun Jung, Lianhui Qin, Sean Welleck, *Faeze Brahman*, Chandra Bhagavatula, Ronan Le Bras, Yejin Choi. *@ EMNLP 2022*

Grounded Keys-to-Text Generation: Towards Factual Open-Ended Generation
Faeze Brahman, Baolin Peng, Michel Galley, Sudha Rao, Bill Dolan, Snigdha Chaturvedi, Jianfeng Gao. *@ Findings of EMNLP 2022*

Towards Inter-character Relationship-driven Story Generation
Anvesh Rao Vijjini, *Faeze Brahman*, Snigdha Chaturvedi. *@ EMNLP 2022*

NarraSum: A Large-Scale Dataset for Abstractive Narrative Summarization
Chao Zhao, *Faeze Brahman*, Kaiqiang Song, Wenlin Yao, Dian Yu, Snigdha Chaturvedi. *@ Findings of EMNLP 2022*

Revisiting Generative Commonsense Reasoning: A Pre-Ordering Approach
Chao Zhao, *Faeze Brahman*, Tenghao Huang, Snigdha Chaturvedi. *@ Findings of NAACL 2022*

Reformulating Sentence Ordering as Conditional Text Generation
Somnath Basu Roy Chowdhury*, _Faeze Brahman_* and Snigdha Chaturvedi. @ _EMNLP 2021_
* : equal contribution

"Let Your Characters Tell Their Story": A Dataset for Character-Centric Narrative Understanding
Faeze Brahman, Meng Huang, Oyvind Tafjord, Chao Zhao, Mrinmaya Sachan, and Snigdha Chaturvedi. @ _Findings of EMNLP 2021_

ParsiNLU: A Suite of Language Understanding Challenges for Persian
Daniel Khashabi et al. @ _TACL 2021_

Uncovering Implicit Gender Bias in Narratives through Commonsense Inference
Tenghao Huang, _Faeze Brahman_, Vered Shwartz, and Snigdha Chaturvedi. @ _Findings of EMNLP 2021_

Learning to Rationalize for Nonmonotonic Reasoning with Distant Supervision
Faeze Brahman, Vered Shwartz, Rachel Rudinger, and Yejin Choi. @ _AAAI 2021_

Modeling Protagonist Emotions for Emotion-Aware Storytelling
Faeze Brahman and Snigdha Chaturvedi. _EMNLP 2020_

Cue Me In: Content-Inducing Approaches to Interactive Story Generation
Faeze Brahman, Alexandru Petrusca, and Snigdha Chaturvedi. @ _AACL 2020_

Effective Forum Curation Via Multi-task Learning
Faeze Brahman, Nikhil Varghase, Suma Bhat, and Snigdha Chaturvedi. @ _EDM 2020_

Electrical and Thermal Energy Management of a Residential Energy Hub, Integrating Demand Response and Energy Storage System
Faeze Brahman, Masoud Honarmand, and Shahram Jadid. _Journal of Energy and Building, 2015_

Development of a Thermal and Electrical Energy Management System in Residential Building Micro-Grid
Saeed Esmaeili, Behrooz Vahidi, Mehdi Parvizimosaed, _Faeze Brahman_. _Journal of Renewable and Sustainable Energy, 2013_

Workshop

Towards Emotion-Aware Storytelling Using Reinforcement Learning
Faeze Brahman, and Snigdha Chaturvedi. _Wordplay: When Language Meets Games Workshop @ NeurIPS 2020_

Automatic Story Generation with Human-in-the-Loop
Faeze Brahman, Alexandru Petrusca, and Snigdha Chaturvedi. _Workshop on Narrative Understanding (WNU) @ NAACL 2019_

US Patent

System and method for artificial intelligence story generation allowing content introduction
Snigdha Chaturvedi, _Faeze Brahman_, and Alexandru Petrusca. _PUB NO: 20, 200, 311, 341, 2020_

Presentations

Talks

Mar 2023. _Inference and Learning Frameworks for Consistent Reasoning and Controlled Language Generation._, UMass NLP Seminars.

Jan 2022. _Modeling Key Narrative Elements for Automatic Story Generation_, University of Southern California.

Jan 2022. _Modeling Key Narrative Elements for Automatic Story Generation_, University of British Columbia.

Nov 2020. _Modeling Protagonist Emotions for Emotion-Aware Storytelling_, EMNLP conference.

Nov 2020. Cue Me In_: Content-Inducing Approaches to Interactive Story Generation_, AACL conference.

Sep 2020. _Weakly-Supervised Rationale Generation for Nonmonotonic Reasoning_, Allen Institute for AI.

Sep 2020. _Automatic Story Generation via Modeling Key Narrative Elements_, UC Santa Cruz, proposal.

Jul 2020. _Effective Forum Curation Via Multi-task Learning_, EDM conference.

Guest Lectures

Winter 2023. _Exploration on Language, Knowledge, and Reasoning_. Guest Lecture, University of Washington.

Fall 2018. _Neural Networks_. Guest Lecture, Machine Learning Course, UC Santa Cruz.

Spring 2018. _Neural Networks_. Guest Lecture, Machine Learning Course, UC Santa Cruz.

Spring 2018. *Generative Adversarial Networks*. Guest Lecture, Machine Learning Course, UC Santa Cruz.

Teaching Experience

2020	**CSE 115: Software Design Project**, Teaching Assistant	*UCSC*
	CSE 16: Discrete Mathematics, Teaching Assistant	
2019	**Natural Language Processing [High school students]**, Teaching Assistant	*UCSC's COSMOS Program*
2018	**CSE 142: Machine Learning and Data Mining**, Teaching Assistant	*UCSC*

Mentoring

2023	**Da Yin**, AI2 Intern (co-mentor: Yuchen Lin & Abhilasha Ravichander)
2023	**Yufei Tian**, AI2 Intern (co-mentor: Ronan Le Bras & Lianhui Qin)
2023	**Skyler Hallinan**, Master Student, University of Washington
2022	**Kavel Rao**, Undergraduate, University of Washington (co-mentor: Liwei Jiang)
2022	**Hanji Chen**, AI2 Intern (co-mentor: Swabha Swayamdipta)
2021	**Tengaho Huang**, Undergraduate, UNC Chapel Hill (co-mentor: Snigdha Chaturvedi)
2020	**Meng Huang**, Master Student, University of Chicago (co-mentor: Mrinmaya Sachan)

Service & Professional Activities

PROGRAM COMMITTEE & REVIEWING

2023	**Program Committee**, NeurIPS, ACL, EMNLP, ARR, NLRSE
2022	**Program Committee**, ARR, ACL, EMNLP
2021	**Program Committee**, ARR, AAAI, ACL, EMNLP, IJCAI
2020	**Program Committee**, AAAI, CoNLL, WNU
2019	**Program Committee**, CoNLL, WNU
2019	**Student Volunteer**, NAACL

WORKSHOP ORGANIZATION

The fifth workshop on Narrative Understanding (WNU) @ ACL2023
`Upcoming...`

The fourth workshop on Narrative Understanding (WNU) @ NAACL2022
`https://sites.google.com/view/wnu2022`
Above 75 attendees

The third workshop on Narrative Understanding, Storylines, and Events (WNU) @ NAACL2021
`https://sites.google.com/view/wnu2021`

DIVERSITY PROMOTING SERVICE

Co-conceptualized and co-organized a Women-in-AI (WiAI) Group at UCSC, 2019.
Mentoring at WiNLP wokrshiop, NAACl 2022. (part of a mentorship and affinity support workshop)

Skills

Python   C++   R   MATLAB   /   Pytorch   TensorFlow   Keras   Texar

HTML/CSS   JavaScript   D3   Bokeh   /   git   LaTeX   Bash script   MySQL