

Faeze Brahman

PHD CANDIDATE · COMPUTER SCIENCE · UC SANTA CRUZ

✉ fbrahman@ucsc.edu | 🏠 www.faeze.ml | 🐦 @faeze_brh

Research Interests

Natural Language Processing, Machine Learning, Natural Language Generation, Social Commonsense Reasoning

Education

University of California, Santa Cruz

Santa Cruz, CA

PHD IN COMPUTER SCIENCE (GPA: 3.87)

2021

- 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

Professional Experience

Research Intern

06/2021-09/2021

MICROSOFT RESEARCH

- Mentors: 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

- Mentors: 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)

Awards

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 Research 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

JOURNAL AND PEER-REVIEWED CONFERENCE PAPERS

Reformulating Sentence Ordering as Conditional Text Generation

Somnath Basu Roy Chowdhury*, [Faeze Brahman](#)* and Snigdha Chaturvedi. *EMNLP 2021*

* : equal contribution

TLDR: We present Reorder-BART, a sentence ordering framework which leverages a pre-trained transformer-based model to identify a coherent order for a given set of shuffled sentences.

“Characters Tell Their Story”: A Dataset for Character-Centric Narrative Understanding

[Faeze Brahman](#), Meng Huang, Oyvind Tafjord, Chao Zhao, Mrinmaya Sachan, Snigdha Chaturvedi. *Findings of EMNLP 2021*

TLDR: We present a new dataset of summaries of literary pieces paired with descriptions of characters that appear in them. Based on the dataset, we introduce to new tasks to encourage research in character-centric narrative understanding.

Uncovering Implicit Gender Bias in Narratives through Commonsense Inference

Tenghao Huang, [Faeze Brahman](#), Vered Shwartz, and Snigdha Chaturvedi. *Findings of EMNLP 2021*

ParsiNLU: A Suite of Language Understanding Challenges for Persian

Daniel Khashabi et al. *TACL 2021*

TLDR: We introduce PARSINLU, the first benchmark in Persian language that includes a range of high-level tasks for natural language understanding.

Learning to Rationalize for Nonmonotonic Reasoning with Distant Supervision

[Faeze Brahman](#), Vered Shwartz, Rachel Rudinger, and Yejin Choi. *AAAI 2021*

TLDR: We investigate the extent to which neural models can reason about natural language rationales that explain model predictions, relying only on distant supervision with no additional annotation cost for human-written rationales.

Modeling Protagonist Emotions for Emotion-Aware Storytelling

[Faeze Brahman](#) and Snigdha Chaturvedi. *EMNLP 2020*

TLDR: In this paper, we present the first study to take into account the emotional trajectory of the protagonist in neural story generation using Reinforcement Learning.

Cue Me In: Content-Inducing Approaches to Interactive Story Generation

[Faeze Brahman](#), Alexandru Petrusca, and Snigdha Chaturvedi. *AAACL 2020*

TLDR: In this paper, we present two content-inducing approaches based on the Transformer Network (Vaswani et al., 2017) for interactively incorporating external knowledge when automatically generating stories.

Effective Forum Curation Via Multi-task Learning

[Faeze Brahman](#), Nikhil Varghese, Suma Bhat, and Snigdha Chaturvedi. *EDM 2020*

TLDR: We investigate the extent to which the tasks of confusion detection and urgency detection in MOOC's forums are correlated so as to explore the possibility of utilizing a multitasking set-up.

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 Parvizimosaei, [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*

Relevant Courses and Projects

PEER-REVIEWED JOURNAL AND CONFERENCE PAPERS

Adv. Topics in NLP

Story Generation with Human-in-the-Loop, Winter 2019

Adv. Machine Learning

Image In-painting Techniques using Generative Adversarial Networks (GANs), Winter 2018

Master Project Course, Alexa

Improvising "Statement" Dialogue acts for Coherent Chat-bot Systems, Spring 2017

Machine Learning

Star Rating Prediction for Yelp Reviews Using SVR, Fall 2016

Data Mining

Data Analysis and Mortality Prediction of ICU patients, Fall 2016

Presentations

GUEST LECTURES

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.

TALKS

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.

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

Service & Professional Activities

PROGRAM COMMITTEE & REVIEWING

- 2021 **Program Committee**, AAI, ACL, EMNLP, IJCAI, CSKB@AKBC
- 2020 **Program Committee**, AAI, CoNLL, WNU@NAACL
- 2019 **Program Committee**, CoNLL, WNU@NAACL
- 2019 **Student Volunteer**, NAACL

WORKSHOP ORGANIZATION

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

- 2021 **Tengaho Huang**, Undergraduate, UNC Chapel Hill (co-mentor: Snigdha Chaturvedi)
- 2020 **Meng Huang**, Master Student, University of Chicago (co-mentor: Mrinmaya Sachan)

Skills

Python C++ R MATLAB / Pytorch TensorFlow Keras Texar
HTML/CSS JavaScript D3 Bokeh / git \LaTeX Bash script MySQL