

Maitreya Patel

Curriculum Vitae

Arizona State University
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Education

- 2023–present **PhD, Computer Science, SCAI, Arizona State University.**
Advisors: Yezhou Yang, Chitta Baral
CGPA : 4.00/4.00
- 2021–2022 : **Masters, Computer Science, SCAI, Arizona State University.**
Thesis: Counterfactual Reasoning for learning implicit physical properties
Advisor: Yezhou Yang, Chitta Baral
CGPA : 4.00/4.00
- 2016–2020 : **Bachelor of Technology, ICT, Dhirubhai Ambani Institute of Information and Communication Technology.**
Advisor: Hemant Patil
CGPA : 7.54/10

Selected Publications

My research has been published at top-tier AI/ML conference venues: 1 at AAAI (h-index: 212), 2 at EMNLP (h5-index: 176), 1 at ICASSP (h5-index: 123), 3 at EUSIPCO (h5-index: 54), etc..

Scholar: scholar.google.com/citations?user=z-mIKgAAAAJ&hl=en.

Latest arXiv / under review:

- 2024 **Maitreya Patel**, Sangmin Jung, Chitta Baral, and Yezhou Yang. Subject-ECLIPSE: Rethinking multi-concept customization for text-to-image generative models. *under review*, 2024.
- 2023 **Maitreya Patel**, Changhoon Kim, Sheng Cheng, Chitta Baral, and Yezhou Yang. ECLIPSE: A Resource-Efficient Text-to-Image Prior for Image Generations. *under review*, 2023. **Media Coverages:** [AK \(akhaliq\)](#), [MarkTechPost](#), [Multiplatform.AI](#).
- 2023 Changhoon Kim*, Kyle Min*, **Maitreya Patel**, Sheng Cheng, and Yezhou Yang. WOUAF: Weight Modulation for User Attribution and Fingerprinting in Text-to-Image Diffusion Models. *Diffusion Workshop at NeurIPS*, 2023. **Media Coverages:** [AK \(akhaliq\)](#).

In Conference Proceedings

- 2024 **Maitreya Patel**, Tejas Gokhale, Chitta Baral, and Yezhou Yang. ConceptBed: Evaluating Concept Learning Abilities of Text-to-Image Diffusion Models. In *Proceedings of the AAAI Conference on Artificial Intelligence*, 2024.
- 2022 **Maitreya Patel**, Tejas Gokhale, Chitta Baral, and Yezhou Yang. CRIPP-VQA: Counterfactual Reasoning about Implicit Physical Properties via Video Question Answering. In *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2022.

- 2022 Yizhong Wang, Swaroop Mishra, Pegah Alipoormolabashi, Yeganeh Kordi, Amirreza Mirzaei, Anjana Arunkumar, Arjun Ashok, Arut Selvan Dhanasekaran, Atharva Naik, David Stap, et al. Benchmarking generalization via in-context instructions on 1,600+ language tasks. In *Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2022.
- 2020 **Maitreya Patel**, Mirali Purohit, Jui Shah, and Hemant A Patil. CinC-GAN for Effective F0 prediction for Whisper-to-Normal Speech Conversion. In *28th European Signal Processing Conference (EUSIPCO)*. IEEE, 2020.
- 2020 Mirali Purohit, Mihir Parmar, **Maitreya Patel**, Harshit Malaviya, and Hemant A Patil. Weak Speech Supervision: A case study of Dysarthria Severity Classification. In *28th European Signal Processing Conference (EUSIPCO)*. IEEE, 2020.
- 2020 Harshit Malaviya, Jui Shah, **Maitreya Patel**, Jalansh Munshi, and Hemant A Patil. MSpeC-Net: Multi-Domain Speech Conversion Network. In *45th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, pages 7764–7768. IEEE, 2020.
- 2019 **Maitreya Patel**, Mihir Parmar, Savan Doshi, Nirmesh J Shah, and Hemant A Patil. Novel adaptive generative adversarial network for voice conversion. In *11th Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC)*, pages 1273–1281. IEEE, 2019.
- 2019 Mihir Parmar, Savan Doshi, Nirmesh J Shah, **Maitreya Patel**, and Hemant A Patil. Effectiveness of cross-domain architectures for whisper-to-normal speech conversion. In *27th European Signal Processing Conference (EUSIPCO)*. IEEE, 2019.

Experience

Research Assistant, ASU

- Fall'22 – ***Robust multi-modal Representation Learning.***
Present **Advisor : Yezhou Yang**

AI/ML Intern, LatentAI

- Summer'22 ***Semantic segmentation model compression for edge devices.***
Advisor : Jan Ernst

Research Assistant, ASU

- May'21 – ***Unsupervised aspect based sentiment analysis.***
May'22 **Advisor : Hasan Davulcu**

Data Science Associates, ZS Associates

- Jan'20 – ***Transformers for rare-disease detection from tabular data.***
Dec'20 **Advisor : Prakash Prakash**

Academic Achievements & Recognitions

- 2023 Received (\$950) **Graduate College Travel Award** FY23 Q4 for NeurIPS from ASU.
- 2022 Received (\$300) **Graduate College Travel Award** FY22 Q1 for EMNLP from ASU.
- 2021 **Simon Fraser University - MSCS Research scholarship** of \$42,000.00 (Declined).
- 2020 **Deans' Award for Excellence in Research & Innovation** in class of 2020 undergraduate batch.

2019 **Ranked under top 50** out of 7000 applicants in **ML-challenge** organized by ZS Associates in India.

Invited Talks

- Jan'24 **Towards Robust Text-to-Image Generative Models in Resource-Efficient Manner.**
RGMV - Tutorial @ WACV'24
- Nov'23 **Survey and Trend in Vision-Language.**
ASU
- Feb'23 **Recent Advances in Generative Models.**
DA-IICT
- July'22 **Importance of Counterfactual Reasoning towards Human Level Intelligence (HLAI).**
LatentAI
- May'20 **MSpeC-Net: Multi-Domain Speech Conversion Network.**
ICASSP
- Aug'19 **Towards eXplainable AI (XAI) to understand what CNNs are learning.**
DAIICT
- Nov'19 **How to deploy any deep learning system?.**
DAIICT

Teaching Experience

- Fall'23 : **Student Project Mentor**, *CSE576: Natural Language Processing*, ASU.
- Fall'22 : **Student Project Mentor**, *CSE576: Natural Language Processing*, ASU.
- Fall'22 : **Teaching Assistant**, *CSE408: Multimedia Information Systems*, ASU.
- Summer'19 : **Teaching Assistant**, *IEEE Summer School on Introduction to Machine Learning*, DAIICT.

Community Services

- Reviewer: **ICML, NeurIPS, EMNLP, ICRA, ICLR.**
NeurIPS Diffusion Workshop, CVPR O-DRUM, SoCalNLP NLP Symposium.
- Volunteer: **NeurIPS, 2022**, New Orleans.
- Convener **Research Club**, 2018-2019, DA-IICT.

Referees

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