

Revant Teotia

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EDUCATION

Columbia University

M.S. in Computer Science, GPA 4.12/4.33

New York, NY

Expected Dec 2022

Indian Institute Of Technology Kanpur

B.Tech. in Computer Science and Engineering, GPA 8.4/10

Kanpur, India

May 2017

PUBLICATIONS

- Affective Faces for Goal-Driven Dyadic Communication, Scott Geng, **Revant Teotia**, Purva Tendulkar, Sachit Menon, Carl Vondrick, In submission
- Doubly Right Object Recognition: A Why Prompt for Visual Rationales, Chengzhi Mao, **Revant Teotia**, Amrutha Varshini Sundar, Sachit Menon, Junfeng Yang, Xin Wang, Carl Vondrick, In submission [arXiv]
- COFAR: Commonsense and Factual Reasoning in Image Search, Prajwal Gatti, Abhirama Penamakuri, **Revant Teotia**, Anand Mishra, Shubhashis Sengupta, Roshni Ramnani, AACL-IJCNLP 2022 [paper][project page]
- Doubly Right Object Recognition, **Revant Teotia**, Chengzhi Mao, Carl Vondrick, ICML 2022 Workshop on Spurious Correlations, Invariance, and Stability (**Spotlight talk, among top-5 papers**) [paper]
- Finding Spuriously Correlated Visual Attributes, **Revant Teotia**, Chengzhi Mao, Carl Vondrick, ICML 2022 Workshop on Spurious Correlations, Invariance, and Stability [paper]
- Few-shot Visual Relationship Co-localization, **Revant Teotia**, Vaibhav Mishra, Mayank Maheshwari, Anand Mishra, ICCV 2021 [paper][project page][code]
- Realtime Indoor Workout Analysis Using Machine Learning & Computer Vision, Amit Nagarkoti, **Revant Teotia**, Amith K. Mahale, and Pankaj K. Das, IEEE EMBC 2019 [paper]

EXPERIENCE

Computer Science Department, Columbia University

Graduate Research Assistant in Carl Vondrick's group

New York, NY

Sep 2021 - Present

- Explainable models: making object recognition models explainable using object descriptions. Training visual prompt for large vision-language model CLIP to give right reasons for predictions.
- Social AI: Understanding human emotions, cultures and interactions from unlabeled videos. Using implicit social knowledge in large language model GPT-3 with vision-language model CLIP to model human interactions.

Indian Institute of Technology Jodhpur

Research Assistant in Anand Mishra's Vision, Language, and Learning Group (VL2G)

Jodhpur, India

Jul 2020 - Aug 2021

- Analyzed novel problem of Visual Relationship Co-localization and invented a meta-learning based optimization framework to solve it in a few-shot manner. Published in ICCV 2021. [paper][project page][code]
- Worked on incorporating commonsense and factual reasoning in image search using external knowledge sources. Published in AACL-IJCNLP 2022.

Samsung Research Institute

Senior Software Engineer, Samsung Health Team

Bangalore, India

Jul 2017 - Jul 2019

- Designed and developed the C++ modules of BLE/NFC communication between Samsung smartwatch and gym fitness equipments. Announced at CES2020 and enjoyed by millions of Samsung Galaxy series 2020 smartwatch users. [news]
- Created a home workout video analysis system using CNN-based human pose-estimation, Optical Flow and Dynamic Time Warping algorithm. Published in IEEE EMBC 2019. [paper]