Revant Teotia

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EDUCATION

NYU Courant Institute of Mathematical Sciences　　　　　　　　　　New York, NY
Ph.D. in Computer Science　　　　　　　　　　　　　　　　　　　　　　　*Sep 2023 -*

Columbia University　　　　　　　　　　　　　　　　　　　　　　　　New York, NY
M.S. in Computer Science　　　　　　　　　　　　　　　　　　　　*Sep 2021 - Dec 2022*

Indian Institute Of Technology Kanpur　　　　　　　　　　　　　　Kanpur, India
B.Tech. in Computer Science and Engineering　　　　　　　　　　*Jul 2013 - May 2017*

PUBLICATIONS

- Affective Faces for Goal-Driven Dyadic Communication,　　　　　　　[arXiv] [project page]
  Scott Geng, **Revant Teotia**, Purva Tendulkar, Sachit Menon, Carl Vondrick,
  In submission

- Doubly Right Object Recognition: A Why Prompt for Visual Rationales,　　　　　　　[paper]
  Chengzhi Mao, **Revant Teotia**, Amrutha Varshini Sundar, Sachit Menon, Junfeng Yang, Xin Wang, Carl Vondrick,
  CVPR 2023

- COFAR: Commonsense and Factual Reasoning in Image Search,　　　　　　[paper][project page]
  Prajwal Gatti, Abhirama Penamakuri, **Revant Teotia**, Anand Mishra, Shubhashis Sengupta, Roshni Ramnani,
  AACL-IJCNLP 2022

- Doubly Right Object Recognition,　　　　　　　　　　　　　　　　　　　　[paper]
  Revant Teotia, Chengzhi Mao, Carl Vondrick,
  ICML 2022 Workshop on Spurious Correlations, Invariance, and Stability (**Spotlight talk, among top-5 papers**)

- Finding Spuriously Correlated Visual Attributes,　　　　　　　　　　　　　　[paper]
  Revant Teotia, Chengzhi Mao, Carl Vondrick,
  ICML 2022 Workshop on Spurious Correlations, Invariance, and Stability

- Few-shot Visual Relationship Co-localization,　　　　　　　　　　[paper][project page][code]
  Revant Teotia, Vaibhav Mishra, Mayank Maheshwari, Anand Mishra,
  ICCV 2021

- Realtime Indoor Workout Analysis Using Machine Learning & Computer Vision,　　　　　[paper]
  Amit Nagarkoti, **Revant Teotia**, Amith K. Mahale, and Pankaj K. Das,
  IEEE EMBC 2019

EXPERIENCE

Fair Labs, Meta AI　　　　　　　　　　　　　　　　　　　　　　　　New York, NY
Visiting Researcher　　　　　　　　　　　　　　　　　　　　　　*Sep 2024 - Present*

- Working on computer vision and machine learning problems.

Langone Radiology Department, New York University　　　　　　　　New York, NY
PhD student researcher in Sumit Chopra's Lab　　　　　　　　　　*Sep 2023 - Present*

- Working on developing machine learning techniques for Radiology applications.

Computer Science Department, Columbia University　　　　　　　　New York, NY
Research Assistant in Carl Vondrick's group　　　　　　　　　　*Sep 2021 - Aug 2023*

- 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   Jodhpur, India

Research Assistant in Anand Mishra's Vision, Language, and Learning Group (VL2G)   *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.   [paper][project page]

Samsung Research Institute   Bangalore, India

Senior Software Engineer, Samsung Health Team   *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]