Revant Teotia

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EDUCATION

Columbia University New York, NY
M.S. in Computer Science, GPA 4.12/4.33 *Expected Dec 2022*

Indian Institute Of Technology Kanpur Kanpur, India
B.Tech. in Computer Science and Engineering, GPA 8.4/10 *May 2017*

PUBLICATIONS

- 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

TECHNICAL SKILLS

Python, PyTorch, PyTorch Geometric, NumPy, Latex, OpenCV, Git, C/C++

EXPERIENCE

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

- Working on making deep learning based imaged classification models explainable using object attributes.
- Working on human body language understanding from unlabelled videos.

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]
- Developed a novel multimodal-transformer architecture in PyTorch for external knowledge-aware image retrieval and generated a custom dataset of 15k images - 45k queries for its training. To be published in AACL-IJCNLP 2022.

Samsung R&D 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 is enjoyed by millions of Samsung 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]