Kshitij Dwivedi

Applied Scientist
Amazon Robotics
Berlin, Germany

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Education

2020-2022
PHD IN CSE
Goethe University Frankfurt, Germany

2009-2014
MASTERS IN EE
IIT Kanpur, India

2009-2014
BACHELORS IN EE
IIT Kanpur, India

Skills

LANGUAGES
Python, C/C++

FRAMEWORK
Pytorch, Tensorflow, Matlab

Teaching

Computer Vision, GU Frankfurt
Neuromatch Academy
EEG MVPA Course
Data Structures, IIT Kanpur

Supervision

MASTER'S THESIS
Andrei Kitaitsev
Vanshika Bawa
Daniel Pietschmann
Yannic Vorpahl

BACHELOR'S THESIS
Domenic Bersch
Quang Anh Le Hong
Martin Pflaum
Raphael Leuner
Marta Paula Balode

Links

Google Scholar: // **kshitijd20**
Semantic Scholar: // **kshitijd20**
Github:// **kshitijd20**
Linkedin:// **kshitijd20**

Research Experience

Sep'22-Now **Amazon Robotics** **Applied Scientist**
Perception for warehouse robots

July-Sep '21 **Allen Institute for AI, USA** **Research Intern (Remote)**
Interpreting representations learned by embodied agents trained to perform navigation tasks in virtual environments (CVPR 22)

2020-2022 **Goethe University, Frankfurt, Germany**
2018-2019 **SUTD, Singapore** **PhD Student**
Applying computer vision to understand human visual system (JoCN 20, PLOS Comp Bio 21), Transfer learning (CVPR 19, ECCV 20)

2017-2017 **ATR, Kyoto, Japan** **Research Engineer**
Reconstruction of perceived images from brain activity using deep learning and GAN (Frontiers in Computational Neuroscience, 19)

2014-2017 **Samsung Research Institute, India** **Senior Software Engineer**
Computer Vision applications for Samsung smartphone cameras (Patent on segmentation, Tracking paper, Saliency paper)

Publications (see all at Scholar)

- What do navigation agents learn about their environment? **CVPR 22**
  K. Dwivedi, G. Roig, A. Kembhavi, R. Mottaghi
- The spatiotemporal neural dynamics of object location representations in the human brain **Nature Human Behavior 22**
  M. Graumann, C. Ciuffi, **K. Dwivedi,** G. Roig, R.M.Cichy,
- Unveiling functions of the visual cortex using task-specific deep neural networks. **PLOS Computational Biology 21**
  K. Dwivedi, M.F. Bonner, R.M.Cichy*, G. Roig*
- Unravelling Representations in Scene-selective Brain Regions Using Scene Parsing Deep Neural Networks. **Journal of Cognitive Neuroscience 21**
  K. Dwivedi, R.M.Cichy*, G. Roig*
- Duality Diagram Similarity: a generic framework for initialization selection in task transfer learning . **ECCV 20**
  K. Dwivedi, J. Huang, R.M.Cichy, G. Roig
- Representation Similarity Analysis for Efficient Task taxonomy and Transfer Learning. **CVPR 19**
  K. Dwivedi, G. Roig
- End-to-End Deep Image Reconstruction From Human Brain Activity. **Frontiers in Computational Neuroscience 19**
  G. Shen*, **K. Dwivedi*,** K. Majima, T. Horikawa, Y. Kamitani

Achievements

- Selected for CVPR 22 Doctoral Consortium Travel Award
- Lead Teaching Assistant in Neuromatch Academy, 2020
- Attended Brain, Minds and Machines (BMM) summer school 2019
- First place in LSUN Saliency Challenge, CVPR 2016.