SUSHRUT THORAT

Contact Information

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GITHUB: novelmartis OTHER INFO: G-Scholar, Full-CV

Goal

Understanding and building resource-constrained agents that can learn and function in the wild

Academic Trajectory

Postdoc in Machine Learning *Ongoing*
Institute of Cognitive Science, Osnabrück University, Germany

Ph.D. in Cognitive Neuroscience *November, 2022*
Donders Centre for Cognition, Radboud University, The Netherlands

M.Sc. (with honors) in Cognitive Neuroscience *July, 2017*
Center for Mind/Brain Sciences (CIMeC), University of Trento, Italy

B.Tech. in Engineering Physics *August, 2015*
Department of Physics, Indian Institute of Technology - Bombay (IIT-B), India

Technical Proficiency

Programming languages: Python, MATLAB, Javascript

Machine learning frameworks: TensorFlow, PyTorch, MatConvNet

Experimentation frameworks: PsychToolbox, jsPsych, Pavlovia

Neuro-imaging: fMRI (data acquisition and analysis), EEG (data analysis)

Selected Publications

Thorat S*, Aldegheri G*, Kietzmann TC (2021). Category-orthogonal object features guide information processing in recurrent neural networks trained for object categorization. *Shared Visual Representations in Human & Machine Intelligence Workshop @ NeurIPS*. *equal contribution.

Thorat S, Proklova D, Peelen MV (2019). The nature of the animacy organization in human ventral temporal cortex. *eLife* 8: e47142.

Anthes D, Thorat S, Konig P, Kietzmann TC (2023). Diagnosing catastrophe: Large parts of accuracy loss in continual learning can be accounted for by readout misalignment. *Conference on Cognitive Computational Neuroscience (CCN)*: 748-751.

Thorat S, Peelen MV (2022). Body shape as a visual feature: evidence from spatially-global attentional modulation in human visual cortex. *NeuroImage*: 119207.

Thorat S, Doerig A, Kietzmann TC (2023). Characterising representation dynamics in recurrent neural networks for object recognition. *Conference on Cognitive Computational Neuroscience (CCN)*: 645-647.

Notable Achievements

- Voted **best poster/short-pitch**, among **15 posters**, in the 'Perception, Action, and Control' theme at the annual Donders Poster Session (2020)
- Recipient of the **Abstract Award**, awarded to **5 of the 57** accepted abstracts at the Rovereto Workshop on Concepts, Actions and Objects (2017).
- Ranked **721 among 450,000** students in the Joint Entrance Examination **(JEE, 2011)** conducted towards admission to the Indian Institute of Technology (IIT).

Reviewing Work

Neural Networks, PLOS Computational Biology, Nature Communications, Science Advances, NeurIPS workshops, Memory & Cognition, eLife, CCN

Supervision

Supervised 9 undergraduate, 3 masters, and 3 PhD students.