

JAYANTH KOUSHIK

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EDUCATION

PhD in Neural Computation and Machine Learning

Jul 2017 – Dec 2023

CARNEGIE MELLON UNIVERSITY, PITTSBURGH, PA

Advisors: Michael J. Tarr, Aarti Singh

Thesis: *Rethinking Object Categorization in Computer Vision*

Awards:

◇ BrainHub Presidential Fellowship (2018)

MS in Computational Data Science

Sep 2015 – May 2017

CARNEGIE MELLON UNIVERSITY, PITTSBURGH, PA

Advisor: Aarti Singh

BE (Hons.) in Computer Science

Aug 2010 – Jul 2014

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI, INDIA

Awards:

◇ Merit Scholarship (Fall 2010, Spring 2011)

◇ OP Jindal Engineering and Management Scholarship (2010, 2012)

WORK EXPERIENCE

Machine Learning Engineer

Sep 2024 –

TIKTOK INC, SAN JOSE, USA

Postdoctoral Researcher

Jan 2024 – May 2024

CARNEGIE MELLON UNIVERSITY

Teaching Assistant

“Fun”-damentals of MRI and Neuroimaging Analysis (Spring 2022)

CARNEGIE MELLON UNIVERSITY

Teaching Assistant

Data Analysis class in Machine Learning (Fall 2018)

CARNEGIE MELLON UNIVERSITY

Software Engineer

Jul 2014 – Jun 2015

DIRECTI, BANGALORE, INDIA

Interim Engineering Intern

Jan 2014 – Jun 2014

QUALCOMM, BANGALORE, INDIA

SKILLS

◦ Python ◦ PyTorch ◦ Matplotlib, Seaborn ◦ NumPy, SciPy, Scikit-Learn ◦ HTML, CSS, JavaScript

PRESENTATIONS

Influence Functions for Black-Box Optimization

J. Koushik, A. Singh, M. J. Tarr.

Talk at *2nd Annual Conference on Machine Learning and Engineering* (MS&T 2019).

Influence Functions for Adaptive Stimulus Selection

J. Koushik, A. Marcus, A. Singh, M. J. Tarr.

Poster at *18th Annual Meeting of the Vision Sciences Society* (VSS 2018).

PUBLICATIONS AND PREPRINTS

Deep learning powered real-time identification of insects using citizen science data [PNAS](#)

S. Chiranjeevi, M. Sadaati, Z. K. Deng, J. Koushik, T. Z. Jubery, D. Mueller, M. E. O'Neal, N. Merchant, A. Singh, A. K. Singh, S. Sarkar, A. Singh, B. Ganapathysubramanian.

In *Proceedings of the National Academy of Sciences* (PNAS Nexus 2024).

AlphaNet: Improving Long-Tail Classification By Combining Classifiers [ARXIV](#)

N. Chang*, J. Koushik*, A. Singh, M. Hebert, Y.-X. Wang, M. J. Tarr.

arXiv:2008.07073 (2023).

Deep Black-Box Optimization with Influence Functions [WEB](#)

J. Koushik, Michael J. Tarr, Aarti Singh.

Preprint (2020).

Eve: A Gradient Based Optimization Method with Locally and Globally Adaptive Learning Rates [ARXIV](#)

H. Hayashi*, J. Koushik*, G. Neubig.

arXiv:1611.01505 (2018).

A Brain Phenotype for Stressor-Evoked Blood Pressure Reactivity [JAHA](#)

P. J. Gianaros, L. K. Sheu, F. Uyar, J. Koushik, J. R. Jennings, T. D. Wager, A. Singh, T. D. Verstyne.

In *Journal of the American Heart Association* (2017).

Hypothesis Transfer Learning via Transformation Functions [ARXIV](#)

S. S. Du, J. Koushik, A. Singh, B. Póczos.

In *31st Conference on Neural Information Processing Systems* (NIPS 2017).

Deep Multimodal Fusion for Persuasiveness Prediction [ACM DL](#)

B. Nojavanasghari*, D. Gopinath*, J. Koushik*, T. Baltrušaitis, L.-P. Morency.

In *18th International Conference on Multimodal Interaction* (ICMI 2016).

* Equal contribution.