

What I accomplished in my four years of undergrad

Homanga Bharadhwaj

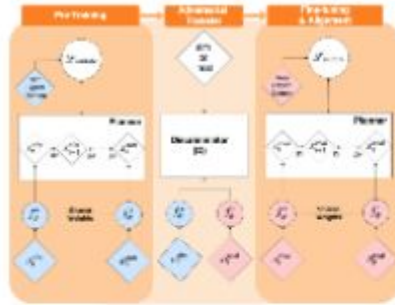
Highlights

Research - I was able to successfully publish **9** peer-reviewed publications, most of which are in the top conferences of my field (AI/ML/HCI). Some of these publications were single-authored by me and others were co-authored with professors at IITK and in other universities.

Extracurriculars - I was an editor in the campus journalism body, Vox Populi for one year (2017-2018). I was also a student guide in the counseling service and responsible for mentoring my juniors. I play Table Tennis. I play Chess. I paint.

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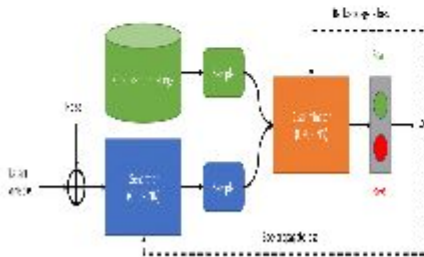
Research - Publications



A Data-Efficient Framework for Training and Sim-to-Real Transfer of Navigation Policies

Homanga Bharadhwaj, Zihan Wang, Yoshua Bengio, Liam Paull
ICRA, 2019

Adversarial domain adaptation can be used for training a gradient descent based planner in simulation and transferring the learned model to a real navigation environment.

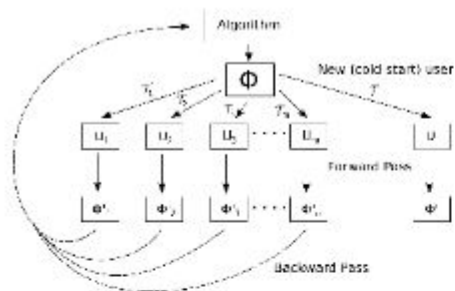


RecGAN: Recurrent Generative Adversarial Networks for Recommendation Systems

Homanga Bharadhwaj, Homin Park, Brian Y. Lim
RecSys, 2018

Recurrent Neural Network based Generative Adversarial Networks can learn to effectively model the latent preference trends of users in time-series recommendation.

Research - Publications



Meta-Learning for User Cold-Start Recommendation

Homanga Bharadhwaj

IJCNN, 2019

A Meta-Learning strategy can be used to develop a recommendation model that performs reasonably good enough for a wide range of users and that can be cost-effectively updated during test time for a specific user



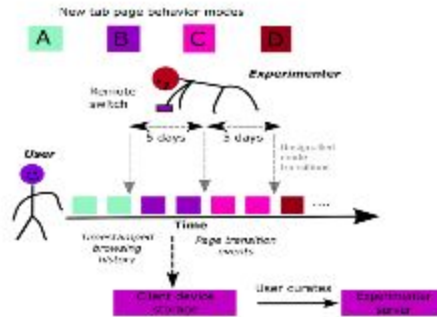
A Hierarchical Multi-Task Learning Framework for Healthy Drink Recognition

Homin Park, Homanga Bharadhwaj, Brian Y. Lim

IJCNN, 2019

A Hierarchical Multi-Task Learning model can leverage several auxiliary tasks like detection of container properties to overcome the limitation of insufficient visual cues for drinks, while predicting the healthiness of drinks from their images

Research - Publications



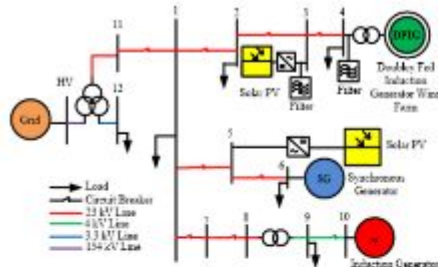
New tab page recommendations cause a strong suppression of exploratory web browsing behaviors

Homanga Bharadhwaj, Nisheeth Srivastava

WebSci, 2019

Passive website recommendations embedded in the new tab displays of browsers (that recommend based on frequency) inhibit people's propensity to visit diverse information sources on the internet

Research - Publications



A Synchrophasor Assisted Optimal Features based Scheme for Fault Detection and Classification

Homanga Bharadhwaj Avinash Kumar Abheejeet Mohapatra
IJCNN, 2019

An optimal features' classifier developed using evolutionary heuristics can be used for real time fault detection and identification



Layer-wise Relevance Propagation for Explainable Recommendations

Homanga Bharadhwaj
EARS Workshop, SIGIR, 2018

Layer-wise relevance propagation can be used for explaining the predictions of a convolutional neural network based recommendation model

Research - Publications

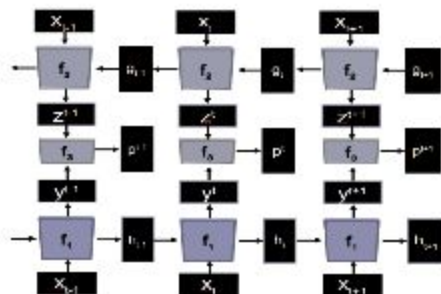


Explanations for Temporal Recommendations

Homanga Bharadhwaj, Shruti Joshi

XAI Workshop, IJCAI, 2018

A neighborhood style explanation scheme can be used as an auxiliary mechanism for interpreting the predictions of a Recurrent Neural Network based temporal recommendation model



Layer-wise relevance propagation for explainable deep learning based speech recognition

Homanga Bharadhwaj,

ISSPIT, 2018

Layer-wise Relevance Propagation can be used for explaining the predictions of a Bi-directional Gated Recurrent Unit based speech recognition model