KUMAR SHUBHAM

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EDUCATION

Indian Institute of Science Bangalore　　　　　　　　　　　　　　　　　　　　Bangalore, India
PhD - representation learning　　　　　　　　　　　　　　　　　　　　　　　　Aug 2022 – present
Supervisor : Dr. Prathosh A P

International Institute of Information Technology Bangalore　　　　　　　　Bangalore, India
Masters by Research - Data Science　　　　　　　　　　　　　　　　　　　Aug 2018 – Dec 2021
Supervisor : Dr. Dinesh Babu Jayagopi, Dr. G. Srinivasaraghavan
CGPA: 3.78/4.0 = 9.45/10.0.
Thesis : AI for personnel psychology

LNM Institute of Information Technology　　　　　　　　　　　　　　　　　Jaipur, India
Bachelors in Electronics and Communication　　　　　　　　　　　　　　　Jul 2012 – Apr 2016
Supervisor : Dr M Tanveer
CGPA: 7.94/10.0.

PUBLICATIONS

Learning a deep reinforcement learning policy over the latent space of a pre-trained GAN for semantic age manipulation
Kumar Shubham, Gopalakrishnan Venkatesh, Reijul Sachdev, Akshi, Dinesh Babu Jayagopi, G. Srinivasaraghavan.
International Joint Conference on Neural Network (IJCNN), 2021. (DOI : 10.1109/IJCNN52387.2021.9533685)

Hybrid unsupervised and supervised multitask learning for speech recognition in low resource languages
K.M Srinivasa Raghavan, **Kumar Shubham**
Workshop on Machine Learning in Speech and Language Processing (MLSLP), Interspeech. 2021. (MLSLP 2021)

One-shot domain adaptation for semantic face editing of real world images using StyleALAE
Ravi Kiran Reddy*, **Kumar Shubham***, Gopalakrishnan Venkatesh, Sriram Gandikota, Sarthak Khoche, Dinesh Babu Jayagopi, Gopalakrishnan Srinivasaraghavan. **(equal contribution)**
arxiv submission, 2021. *(https://arxiv.org/abs/2108.13876)* **(Under review)**

An opportunity to investigate the role of specific nonverbal cues and first impression in interviews using deep fake based controlled video generation
Rahil Vijay, **Kumar Shubham**, Emmanuelle Patricia Kleinlogel, Laetitia Renier, Marianne Schmid Mast, Dinesh Babu Jayagopi.
Workshop on Corpora And Tools for Social skills annotation (CATS), International conference on multimodal interaction (ICMI). 2021.

Conventional and Non-conventional job interview methods: A comparative analysis between two countries
Kumar Shubham, Emmanuelle Patricia Kleinlogel, Anaïs Butera, Marianne Schmid Mast, Dinesh Babu Jayagopi.
International conference on multimodal interaction (ICMI), 2020. (DOI: 10.1145/3382507.3418824)

A regularization on Lagrangian twin support vector regression
M. Tanveer, **Kumar Shubham**.
International Journal of Machine Learning and Cybernetics (Journal), 2017. (DOI: 10.1007/s13042-015-0361-6)

Smooth twin support vector machines via unconstrained convex minimization
M. Tanveer, **Kumar Shubham**.
Filomat (Journal), 2017. *(https://www.jstor.org/stable/26194958)*

An efficient regularized K-nearest neighbor based weighted twin support vector regression
M. Tanveer, **Kumar Shubham**, Mujahed Aldhaifallah, SS Ho.
Knowledge-Based Systems(Journal), 2016. *(DOI: 10.1016/j.knosys.2015.11.011)*

An efficient implicit regularized Lagrangian twin support vector regression
M. Tanveer, **Kumar Shubham**, Mujahed Aldhaifallah, KS Nisar.
Applied intelligence(Journal), 2016. *(DOI: 10.1007/s10489-015-0728-0)*

RESEARCH EXPERIENCE

Embodied conversational agent
Mentors: Raj Tumuluri (Openstream.ai) & Dr. Dinesh Babu Jayagopi (IIIT - Bangalore)   March 2021 – July 2022
As part of a collaborative project between IIIT-B and Openstream.ai, I was leading a team from IIIT-B to create an embodied conversational agent.

Curvature estimation of identity manifold in StyleGAN
Mentors: Dr. G. Srinivasaraghavan (IIIT-Bangalore)   Jan 2021 – July 2021
Worked on estimating Riemannian curvature of facial identity manifold over the latent space of pre-trained StyleGAN using meta-learning algorithms.

AI for social psychology
Mentors: Dr. Marianne Schmid Mast (UNIL, Switzerland)   Feb 2020 – Present
Worked on the application of deepfake and pose transfer-based generative models for social psychology-based experiments. We are exploring different methods and tools to facilitate causal experiments in a controlled environment.

Mortality and disease prediction
Xerox Research Center, India   Dec 2015 – Jan 2016
Worked on mortality and disease prediction for patients admitted in ICU. We used different vitals, labs, and medical information provided by hospitals for admitted patients and explored machine learning algorithms to develop an early complication prediction system.

INDUSTRIAL EXPERIENCE

Dataweave software pvt ltd   Bangalore, India
Data engineer, Data science Dept.   2016 – 2018
As part of a full-time job, I have worked on content-based image retrieval algorithms and developed infrastructure to match different products from fashion and footwear categories in a pool of billions of data points from E-commerce sites like Amazon, Walmart, e.t.c.
My team developed a unique solution to search for counterfeit products on E-commerce sites. This project bagged the prize for one of the most innovative startup solutions provided by companies in India, by the chamber of commerce of the IT industries (NASSCOM).

SKILLS

Languages	Python, Javascript, c++, Java
Python Libraries	Pytorch, Tensorflow, Pandas, Numpy, Scikit-Learn, OpenCV

HONORS AND AWARDS

Speaker, Data Science Developer Summit (Fifth Elephant, Bangalore) (video)	2018
Finalist, Xerox Research Innovation Challenge (Xerox, India)	2016
Open source contribution (DeepDetect) (Commit)	2016