KUMAR SHUBHAM

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EDUCATION

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

LNM Institute of Information Technology — Jaipur, India
Bachelors in Electronics and Communication — Jul 2012 – Apr 2016
CGPA: 7.96/10.0.

PUBLICATIONS

Learning a deep reinforcement learning policy over the latent space of a pre-trained GAN for semantic age msanipulation
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
Muhammad 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
Muhammad Tanveer, **Kumar Shubham**.
Filomat (Journal), 2017. (https://www.jstor.org/stable/26194958)

An efficient regularized K-nearest neighbor based weighted twin support vector regression
Muhammad 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
Muhammad 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 – Present
As part of a collaborative project between IIIT-B and Openstream.ai, I am leading a team from IIIT-B to create a embodied conversational agent. The project aims to create a realistic looking virtual avatar which can interact with a human and take appropriate verbal & nonverbal actions based on user's response. The agent analyzes the multimodal features of the user to generate appropriate dialogue and empathetic behavior.

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 the causal experiments in 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 medicine information provided by hospitals for the admitted patients and explored machine learning algorithms to develop 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 base image retrieval algorithms and developed infrastructure to match different product from fashion and footwear categories in a pool of billions of data point from E-commerce sites like Amazon, Walmart, e.t.c.
My team developed an unique solution to search counterfeit products on E-commerce sites. This project bagged the prize for one of the most innovative startup solution 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
Chairperson, IEEE student branch (LNMIIT, Jaipur) 2016
Semi finalist, Texas Innovation Challenge (Texas Instruments, India) 2015