

# Abhinav Shukla

Research Engineer  
Meta

email: abhinav.shukla.research@gmail.com  
website: abhinav95.github.io

Interests	Multimodal machine learning, Self-supervised learning, Computer vision, Language, Audio		
Experience	<b>Meta</b>		2022 - present
	<i>Research Engineer, Audio Visual Machine Learning</i> Worked in the Audio team at Reality Labs Research. Developed infrastructure for large scale training, benchmarking, and optimizing multimodal/audiovisual models for AR glasses. Conducted research on egocentric audiovisual machine learning and computer vision for AR (under review at CVPR 2023).		
Education	<b>Imperial College London</b>		2018 - 2022
	<i>PhD in Computer Science</i> Adviser: Prof. Maja Pantic Thesis: <i>Learning Self-Supervised Representations of Audiovisual Human-Centric Data</i>		
	<b>International Institute of Information Technology, Hyderabad</b>		2017 - 2018
	<i>MS in Computer Science by Research</i> Adviser: Prof. Ramanathan Subramanian Thesis: <i>Multimodal Emotion Recognition from Advertisements with Application to Computational Advertising</i>		
Internships	<b>International Institute of Information Technology, Hyderabad</b>		2013 - 2017
	<i>B.Tech (Hons.) in Computer Science and Engineering</i> GPA 8.78/10.00		
	<b>Facebook Reality Labs (FRL) Research</b>		Fall 2020, Spring 2021
	<i>With Anurag Kumar and Vamsi Krishna Ithapu</i> Worked on self-supervised audiovisual representation learning in the FRL Research Audio team.		
Fellowships, Awards, & Recognition	<b>National University of Singapore</b>		Fall 2017, Spring 2018
	<i>With Prof. Mohan Kankanhalli</i> Studied multimodal (audio, video, eye-tracking, physiology) affect recognition in advertisement videos. Published in IEEE Transactions on Affective Computing and at ICMI 2018.		
	<b>Google Summer of Code</b>		Summer 2016, 2017
	<i>2017: Red Hen Lab, with Prof. Francis Steen and Prof. Mark Turner</i> <i>2016: CCExtractor, with Carlos Fernandez Sanz</i>		
Fellowships, Awards, & Recognition	<b>Samsung PhD Fellowship</b>		2019-2020
	<b>IIIT Hyderabad Fast-track Masters thesis</b> (for high quality papers in reputed venues)		2018
	<b>IIIT Hyderabad Research award</b> (for publishing as an undergraduate)		2018
	<b>ACM SIGCHI Gary Marsden Student Development Fund</b> (to attend ICMI 2018)		2018
	<b>Google India Travel Grant</b> (to attend ACM MM 2017)		2017
	<b>ACM ICMI 2017 Travel Grant</b> (to attend ICMI 2017)		2017
	<b>Dean's Merit List Award for excellence in academics</b> (6 consecutive semesters)		2014-2017
Preprints	[10] <b>Egocentric Auditory Attention Localization in Conversations</b> F. Ryan, H. Jiang, A. Shukla, V. Ithapu, J. Rehg <i>Under review at CVPR, 2023</i>		
Journal Articles	[9] <b>Does Visual Self-Supervision Improve Learning of Speech Representations?</b> A. Shukla, S. Petridis, M. Pantic <i>IEEE Transactions on Affective Computing (TAFEC)</i> , 2021		
	[8] <b>Recognition of Advertisement Emotions with Application to Computational Advertising</b> A. Shukla, S. S. Gullapuram, H. Katti, M. Kankanhalli, R. Subramanian		

Conference Publications	[7]	<b>Learning Self-Supervised Multimodal Representations of Human Behaviour</b> A. Shukla <i>Doctoral Symposium at ACM International Conference on Multimedia (ACM MM), 2020</i>	
	[6]	<b>Visually Guided Self Supervised Learning of Speech Representations</b> A. Shukla, K. Vougioukas, P. Ma, S. Petridis, M. Pantic <i>International Conference on Acoustics, Speech, and Signal Processing (ICASSP), 2020, Oral</i>	
	[5]	<b>Looking Beyond a Clever Narrative: Visual Context and Attention are Primary Drivers of Affect in Video Advertisements</b> A. Shukla, H. Katti, M. Kankanhalli, R. Subramanian <i>ACM International Conference on Multimodal Interaction (ICMI), 2018, Oral</i>	
	[4]	<b>Evaluating Content-Centric vs. User-Centric Ad Affect Recognition</b> A. Shukla, S. S. Gullapuram, H. Katti, K. Yadati, M. Kankanhalli, R. Subramanian <i>ACM International Conference on Multimodal Interaction (ICMI), 2017</i>	
	[3]	<b>Affect Recognition in Ads with Application to Computational Advertising</b> A. Shukla, S. S. Gullapuram, H. Katti, K. Yadati, M. Kankanhalli, R. Subramanian <i>ACM International Conference on Multimedia (ACM MM), 2017, Oral</i>	
Workshop Papers	[2]	<b>Learning Speech Representations from Raw Audio by Joint Audiovisual Self-Supervision</b> A. Shukla, S. Petridis, M. Pantic <i>ICML Workshop - Self-Supervision in Audio and Speech, 2020</i>	
	[1]	<b>Visual Self-Supervision by Facial Reconstruction for Speech Representation Learning</b> A. Shukla, S. Petridis, M. Pantic <i>CVPR Workshop - Sight and Sound, 2020</i>	
Invited Talks & Panels		<b>Learning Self-Supervised Multimodal Representations of Human Behavioural Data</b> Mitsubishi Electric Research Laboratories (MERL)	2021
		<b>Self-Supervised Representation Learning in Audiovisual Speech</b> University of Nottingham	2019
		<b>Automatic Understanding of News Videos &amp; CCEXtractor</b> Universität Osnabrück	2017
Relevant Coursework		Computer Vision, Machine Learning, Digital Image Processing Optimization Methods, Statistical Methods in AI, Digital Signal Processing Artificial Intelligence, Computer Networks, Advanced Computer Networks, Algorithms	
Professional Activities	<b>Reviewing</b>		
		IEEE Transactions on Affective Computing (TAFFC)	2019, 2020, 2021, 2022
		IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)	2022, 2023
		Affective Computing and Intelligent Interaction (ACII)	2022
		IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)	2021
		IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)	2021
		International Journal of Computer Vision (IJCV)	2021
		IEEE International Conference on Automatic Face and Gesture Recognition (FG)	2019
		ACM International Conference on Multimodal Interaction (ICMI)	2018
Teaching Experience		<b>ICS251: Computer Networks</b> , IIIT Hyderabad	2016
		Teaching Assistant with Prof. Ganesh Iyer	