Rishabh Garg

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Education

2019 - 2021 (Expected)	Master of Science in COMPUTER SCIENCE, **The University of Texas at Austin** | **CGPA**: 4.0/4.0
2015 - 2019	B.Tech (Honors) in COMPUTER SCIENCE AND ENGINEERING, **IIIT-Delhi**
	CGPA: 9.40/10 | Graduated with Honors for commendable academic performance

Experience

JAN 2020 - PRESENT	*Graduate Research Assistant*, **The University of Texas at Austin**
	• Working with Prof. Kristen Grauman on Audio-Visual Learning from Videos.
	• Using spatial audio information in 360° videos to extract regions of interest for better audio-visual features.
JUN 2020 - AUG 2020	*Software Engineer Intern*, **Amazon**, Seattle
	• Built a critical service, as a part of the Traffic Mirroring team in Amazon Web Services (AWS), using serverless Lambda to interact with Native AWS.
	• Worked independently on the design and implementation of the Lambda service, which consumed data from DynamoDB Streams, and interacted with AWS EC2 APIs.
MAY 2018 - JUN 2018	*Software Engineer Intern*, **Goldman Sachs**, Bengaluru
	• Developed a unified search platform using Elasticsearch, which included indexing the database of all suspicious activities detected within the firm.
	• Worked on the webapp back-end using Spring, on the front-end UI using React, and on adding features to allow analysis by saving and exporting results to MongoDB.
JUN 2017- DEC 2018	*Undergraduate Researcher, Image Analysis and Biometrics Lab*, **IIIT-Delhi**
	• Worked on applying deep metric learning for cross-modal face and other biometric recognition.
	• Achieved state-of-the-art performance on multiple cross-spectral and cross-resolution face and periocular datasets. Results published in IEEE BTAS 2018 (pdf).
	Advisors: Prof. Mayank Vatsa, Prof. Richa Singh
MAY 2016- AUG 2016	*Student Developer*, **Google Summer of Code**
	• Worked for the organisation CCExtractor to add support for extraction of bitmap-based subtitle frames from DVDs, and to export results to text files. (project page)

Publications

R Garg, Y Baweja, S Ghosh, M Vatsa, R Singh, N Ratha; "Heterogeneity Aware Deep Embedding for Mobile Periocular Recognition". IEEE International Conference on Biometrics: Theory, Applications, and Systems (BTAS) 2018 (pdf)

Projects

2020	fMRI response to Visual Stimuli	Used CNNs to classify fMRI BOLD responses based on visual stimuli, and reconstruct the original image from just the response using GANs. (code)
2019	Human Feedback + Demonstrations for RL	Developed a Reinforcement Learning algorithm using human feedback, and demonstrations, which outperforms both constituent methods. (code, video)
2019	Parallel program runtime	Implemented a runtime scheduler in C++ for optimizing energy efficiency of multiple parallel heterogeneous processes.
2018	Disentangling in Facial Images	Worked on an independent research project to disentangle expression information from the latent representations of face images using non-adversarial autoencoders. Advisor: Dr. Saket Anand

Skills

Programming :	Python, Java, C++, C, JavaScript
Frameworks and Tools:	PyTorch, AWS Technologies, DynamoDB, React, SQL, MongoDB, OpenCV, Tensorflow

Honours and Recognition

2016-2018	**Dean's List**, IIIT Delhi: Awarded for academic excellence for four consecutive years from 2015-19.
2015	**Chairman's Merit Scholarship**, IIIT Delhi: For a rank below 2000 (out of 1.2 million students) in JEE(Mains) .