Aarush Gupta

Third Year Undergraduate | Computer Science and Engineering
Indian Institute of Technology Roorkee
agupta1@cs.iitr.ac.in | aarushgupta | @c414driu5 | aarush98

REFERENCES

DR. MARCO PEDERSOLI
Assistant Professor
ETS Montreal, Canada
Email: marco.pedersoli@etsmtl.ca

DR. BIPLAB BANERJEE
Assistant Professor
IIT Bombay, India
Email: bbanerjee@iitb.ac.in

EDUCATION

IIT ROORKEE
B.Tech. in Comp. Sci. & Eng.
2016-2020 | Roorkee, India
CGPA: 8.58/10.0

DAV SR. SEC. SCHOOL
Senior Secondary Education
2014-16 | Chandigarh, India
Secured 90.4% in 12th standard
(Examination conducted by CBSE)

NAVY CHILDREN SCHOOL
Secondary Education
2012-14 | Port Blair,India
Secured 10.0/10.0 CGPA in 10th standard
(Examination conducted by CBSE)

COURSEWORK

UNDERGRADUATE
- Probability for Computer Science
- Design & Analysis of Algorithms
- Operating Systems
- Computer Networks
- Database Management Systems
- Theory of Computation
- Data Structures
- Discrete Structures

PROGRAMMING SKILLS

Languages:
Python • C++ • C
Operating Systems:
Windows • Linux
Tools:
Keras • PyTorch • Spyder • Jupyter Notebook • Git
Familiar with:
Java • HTML • CSS • JavaScript

EXPERIENCE

ÉCOLE DE TECHNOLOGIE SUPÉRIEURE | May 2018 – July 2018
Remote Research Internship | Prof. Marco Pedersoli
- Developed an end-to-end attention-based model for jointly learning the scene and facial features of an image for group-level emotion recognition **[GitHub Link]** .
- The model achieved **4th rank** in the ICMI 2018 EmotiW Group Level Emotion Recognition Challenge. A short paper describing the methodology has been accepted for the conference's main proceedings.

PUBLICATIONS

An Attention Model for group-level emotion recognition
Aarush Gupta *, Dakshit Agrawal*, Hardik Chauhan, Jose Dolz, Marco Pedersoli
ACM International Conference on Multimodal Interaction 2018 **[Link]** .

PROJECTS

TRIPLET VAE FOR ZERO-SHOT LEARNING | January 2018 – April 2018
Prof. Biplab Banerjee, IIT Roorkee
Developed a classifier based on Zero-Shot Learning for the Animals with Attributes dataset.
- Used Deep Metric Learning for learning a joint latent embedding of the visual and semantic features of the data points using a VAE based on the Triplet Loss function.

UNSUPERVISED HUMAN ACTION RECOGNITION IN VIDEOS | August 2017 – January 2018
Prof. Biplab Banerjee, IIT Roorkee
Developed a model which divides a video into clusters of video frames based on the human actions depicted by the frames.
- Implemented Spectral Clustering, using the Normalized Cuts Algorithm, for unsupervised clustering of video frames which constitute a common human action.
- Used Conditional Random Fields for incorporating the temporal features of the frames into the clustering algorithm.

ACHIEVEMENTS

2016	All India Rank 363	JEE Advanced, rank out of 200,000 candidates.
2015	KVPY Fellowship	National fellowship holder of one of the most prestigious fellowships in India **[Link]** .
2013	2nd Position	State Level Science Quiz (Organized by the Science Unit, Directorate of Education, A&N Administration).

EXTRACURRICULAR ACTIVITIES

- **Core Member :** Vision & Language Group, IIT Roorkee **[Website Link]**
- **Student Mentor :** Student Mentorship Program IIT Roorkee.