AKSHITA GUPTA

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EDUCATION

University of Guelph & Vector Institute Sep'22 – (expected '24)
MASc in Computer Engineering with Specialization in AI
Advisor: Graham Taylor

DIT University, Dehradun Aug'14 – Dec'18
BTech in Computer Science Engineering

PUBLICATIONS

1. OW-DETR: Open-world Detection Transformer [paper, code]
   Akshita Gupta*, Sanath Narayan*, Joseph KJ, Salman Khan, Fahad Shahbaz Khan, Mubarak Shah
   CVPR 2022

2. Discriminative Region-based Multi-Label Zero-Shot Learning [paper, code, webpage]
   Sanath Narayan*, **Akshita Gupta***, Salman Khan, Fahad Shahbaz Khan, Ling Shao, Mubarak Shah
   ICCV 2021

3. Generative Multi-Label Zero-Shot Learning [paper, code, webpage]
   Akshita Gupta*, Sanath Narayan*, Salman Khan, Fahad Shahbaz Khan, Ling Shao, Joost van de Weijer
   Under Review in **TPAMI**

4. Latent Embedding Feedback and Discriminative Features for Zero-Shot Classification [paper, code, webpage]
   Sanath Narayan*, **Akshita Gupta***, Fahad Shahbaz Khan, Cees G.M. Snoek, Ling Shao
   ECCV 2020

5. iSAID: A Large-scale Dataset for Instance Segmentation in Aerial Images [paper, webpage, code]
   Syed Waqas Zamir*, Aditya Arora*, **Akshita Gupta**, Salman Khan, Guolei Sun, Fahad Shahbaz Khan, Fan Zhu, Ling Shao, Gui-Song Xia, Xiang Bai
   CVPR-W Oral 2019

6. Acoustic features fusion using attentive multi-channel deep architecture [paper, ppt, code]
   Gaurav Bhatt, **Akshita Gupta**, Aditya Arora, Balasubramanian Raman
   InterSpeech-W 2018

(* denotes equal contribution)

RESEARCH EXPERIENCE

Applied Machine Learning Intern, Vector Institute
Supervisor: Dr David Emerson Jan'23 - April'23

- Working on the prompting for Large language models and developing implementations towards the prompt engineering lab.

Data Scientist, Bayanat for Mapping & Surveying
Supervisor: Dr Meng Wang Jan'22 - Aug'22

- Working towards delivering Computer Vision models based on object detection, segmentation, satellite imagery, and autonomous driving.

Research Engineer, Inception Institute of Artificial Intelligence
Supervisors: Dr Sanath Narayan, Dr Salman Khan, Dr Fahad Shahbaz Khan Dec'18 – Jan'22

- Developing deep learning algorithms for low- (Few- and zero-) shot detection and classification, generative adversarial models and open-world object detection problems.
- Developed rock & seismic layer classification system.
  1. Worked with the 12'th largest oil company ADNOC.
  2. Refined classification algorithm for the task of rock and texture classification.
  3. Maintained & deployed GUI Interface for the algorithm presenting real-time results.
- Worked on satellite-imagery object detection and object counting system.
  1. Lead and maintained the main deployment codes working along with satellite imagery team.
  2. Object detection: Improved object detector models like PANet and Mask-RCNN for their collected data.
  3. Object Counting: Implemented and combined different counting algorithms like LCFCN and LPNs.

Research & Development Intern, Mozilla
Supervisor: Mrs. Emma Irwin May'18 – Aug'18

* Developed open-source analytics dashboard, metrics to evaluate diversity & inclusion across diff. communities.

Research Intern, IIT Roorkee
Supervisor: Dr R Balasubramanian May'17 – Dec'18

* Worked on acoustic scene recognition & audio tagging system using channel & spatial attention modules.

PROFESSIONAL ACTIVITIES

* **Conference and Journal Reviewing**
  CVPR 2023, CVPR and ECCV 2022, ICCV 2021, TPAMI
* **Invited Talks and Panels**
  ComputerVision talks Dec'21 Call, Mozilla Open-source community Call
* Undergraduate Teaching Assistant, TCS821: Cloud Computing

ACHIEVEMENTS

* Travel Scholarship for ALL-Hands Mozilla, San Francisco. (Awarded to top 1% candidates)
* Outreachy Scholarship recipient (2018- 2019). (Awarded to top 2% candidates)
* Selected for Bertelsmann Data Science Scholarship. (Awarded to top 1500 students)
* Scored among top 150 globally at Cognizant Mastercode Hackathon

PROGRAMMING SKILLS

* **Languages:** Python, C++, SQL, HTML, Javascript
* **Libraries:** Pytorch, Tensorflow, Keras
* **Frameworks:** Flask, Bootstrap
* **Software:** GIT, Docker, Latex