Mahesh Reddy

+1 (204)-951-9459 • maheshk2194@sfu.ca
maheshkkumar.github.io

Education

- **Simon Fraser University** — **Sep. 2020 - Dec. 2022**
  M.Sc. in Computing Science, — *Burnaby, Canada*
  Advisor: Prof. Yağız Aksoy
- **University of Manitoba** — **Sep. 2018 - Apr. 2020**
  M.Sc. in Computer Science, — *Winnipeg, Canada*
  Advisor: Prof. Yang Wang
  Thesis: Scene Adaptive Crowd Counting
- **Visvesvaraya Technological University** — **Aug. 2012 - May 2016**
  B.E. in Information Science & Engineering, — *Bangalore, India*
  First Class with Distinction

Research Experience

Research Interests: Computer Vision, Computational Photography, Machine Learning

- **Graduate Research Assistant** — **Simon Fraser University**
  Advisor: Prof. Yağız Aksoy — *Sep. 2020 - Present*
  Conducting research on monocular depth estimation.

- **Graduate Research Assistant** — **University of Manitoba**
  Advisor: Prof. Yang Wang — *Sep. 2018 - Aug. 2020*
  Conducted research on developing deep learning models for scene understanding problems: crowd density estimation, anomaly detection, and video understanding.

- **ML Research Intern** — **Borealis AI**
  Mentors: Dr. Jianhui Chen and Dr. Hossein Hajimirsadeghi — *May 2020 - Aug. 2020*
  Conducted research on counterfactual model explanations.

Publications

9. Obumneme Stanley Dukor, S. Mahdi H. Miangoleh, **Mahesh Kumar Krishna Reddy**, Long Mai and Yağız Aksoy. Interactive Editing of Monocular Depth. *ACM SIGGRAPH Posters*, 2022. [Paper]

8. **Mahesh Kumar Krishna Reddy**, Mrigank Rochan, Yiwei Lu and Yang Wang. AdaCrowd: Unlabeled Scene Adaptation for Crowd Counting. *IEEE Transactions on Multimedia (TMM)*, 2021. [Paper][Code]

7. Mrigank Rochan, **Mahesh Kumar Krishna Reddy** and Yang Wang. Sentence Guided Temporal Modulation for Dynamic Video Thumbnail Generation. *British Machine Vision Conference (BMVC)*, 2020. [Paper]

6. Mrigank Rochan, **Mahesh Kumar Krishna Reddy**, Linwei Ye and Yang Wang. Adaptive Video Highlight Detection by Learning from User History. *European Conference on Computer Vision (ECCV)*, 2020. [Paper][Code]

5. Yiwei Lu, Frank Yu, **Mahesh Kumar Krishna Reddy** and Yang Wang. Few-Shot Scene-Adaptive Anomaly Detection. *European Conference on Computer Vision (ECCV)*, 2020. **(Spotlight)** [Paper]

4. **Mahesh Kumar Krishna Reddy**, Mohammad Hossain, Mrigank Rochan and Yang Wang. Few-Shot Scene Adaptive Crowd Counting Using Meta-Learning. *IEEE Winter Conference on Applications of Computer Vision (WACV)*, 2020. [Paper] [Code]

3. Mohammad Hossain, **Mahesh Kumar Krishna Reddy**, Kevin Cannons, Zhan Xu and Yang Wang. Domain Adaptation in Crowd Counting. *Computer and Robot Vision Conference (CRV)*, 2020. [Paper]

2. Mohammad Hossain, **Mahesh Kumar Krishna Reddy**, Mehrdad Hosseinzadeh, Omit Chanda and Yang Wang. One-Shot Scene-Specific Crowd Counting. *British Machine Vision Conference* (*BMVC*), 2019. [Paper]

1. Yiwei Lu, **Mahesh Kumar Krishna Reddy**, Seyed shahabeddin Nabavi and Yang Wang. Future Frame Prediction Using Convolutional VRNN for Anomaly Detection. *IEEE International Conference on Advanced Video and Signal-based Surveillance* (*AVSS*), 2019. [Paper]

Awards and Honors

- CMPT Graduate Fellowship, Simon Fraser University, 2020, 2021
- Graduate Fellowship, Simon Fraser University, 2020, 2021
- Graduate Fellowship, University of Manitoba, 2018, 2019 - 2020
- International Graduate Student Entrance Scholarship, Faculty of Graduate Studies, University of Manitoba, 2018 - 2019
- Faculty of Graduate Studies Travel Award, University of Manitoba, 2020
- Conference Travel Grant, Department of Computer Science and Faculty of Science, University of Manitoba, 2020

Teaching Experience

Teaching Assistant, CMPT 361: Introduction to Computer Graphics (SFU) Spring (Jan. to Apr.) 2022
Grader/Marker, COMP 4360: Machine Learning (UManitoba) Winter (Jan. to Apr.) 2020

Activities

Reviewer

- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- IEEE Transactions on Image Processing (TIP)
- Pacific Graphics (PG), 2021
- British Machine Vision Conference (BMVC), 2020, 2021
- IEEE Winter Conference on Applications of Computer Vision (WACV), 2020

Industry Experience

- **Software Engineer (Machine Learning)** **Infrrd.ai**
  Bangalore, India *Jun. 2017 - Jul. 2018*
  Developed deep learning solutions to estimate the house condition for real-estate applications.
- **Software Engineer** **Cerner Healthcare Solutions Pvt. Ltd.**
  Bangalore, India *Jun. 2016 - Jun. 2017*
  Developed statistical visualization tools to monitor the progress of change/service requests.

Pro-bono

- **Student Volunteer** — **SIGGRAPH**
  Vancouver, Canada — *Aug. 2022*
- **Student Volunteer** — **NeurIPS**
  Vancouver, Canada — *Dec. 2019*
- **Core Team Member** — **DataKind Bangalore Chapter**
  Bangalore, India — *Mar. 2017 - Jun. 2018*

Additional courses

- **Computer Vision Summer School** — **IIITH**
  Hyderabad, India — *2018*
- **Machine Learning Summer School** — **IIITH**
  Hyderabad, India — *2018*

Skills

Languages: Python, Java, HTML, JavaScript, LaTeX

Tools: Linux Shell, Vim, PyTorch, Keras, Flask, OpenCV

References

Available on request.