ADITYA ANANTHARAMAN

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Education

Carnegie Mellon University (CMU), School of Computer Science — Pittsburgh, PA
Master of Computational Data Science (MCDS) — December 2020
Relevant Coursework: Computer Systems, Machine Learning, Cloud Computing, Interactive Data Science

National Institute of Technology Karnataka, Surathkal (NITK) — Surathkal, India
Bachelor of Technology Information Technology — May 2019
GPA: 9.54/10, *Class Rank:* 5/103
Relevant Coursework: Linear Algebra and Matrices, Soft Computing, Design and Analysis of Algorithms, Computer Vision, Information Retrieval, Advanced Computer Networks, Time Series Analysis

Experience

Indian Institute of Technology, Hyderabad (IITH) — Hyderabad, India
Research Intern at Visual Learning and Intelligence (VIGIL) lab — August 2018 - December 2018

- Developed a novel Multi-Space model for Zero-Shot Object Detection (ZSD).
- Leveraged both semantic and visual spaces and introduced a cross-modal consistency loss to alleviate hubness.
- Outperformed the state-of-the-art in ZSD on Pascal VOC by 14% in terms of mAP. Work accepted at WACV 2020.

Microsoft — Hyderabad, India
Software Engineering Intern — May 2018 - July 2018

- Developed a plug and play service for effective management, monitoring and usage of Test clusters for the Azure Networking Team.
- Facilitated easy locking and unlocking of clusters and devised health checks for seamless maintenance of clusters.
- Built a UI dashboard alongside the service for interacting and reporting.

Publications

- Dikshant Gupta, **Aditya Anantharaman**, Nehal Mamgain, Sowmya Kamath, V. Balasubramanian, C. V. Jawahar *"A Multi-Space Approach to Zero-Shot Object Detection"*, Winter Conference on Applications of Computer Vision (WACV 2020)
- Mandikal Vikram, **Aditya Anantharaman**, Suhas B S and Sowmya Kamath, *"An Approach for Multimodal Medical Image Retrieval using Latent Dirichlet Allocation"*, India KDD CoDS-COMAD 2019 (Oral Presentation). Short version accepted at AI for Social Good Workshop, NeurIPS 2018.
- Mandikal Vikram, **Aditya Anantharaman**, Suhas B S, Ashwin TS, Ram Mohana Reddy, *"Kinect Based Suspicious Posture Recognition for Real-Time Home Security Applications"*, IEEE Indicon 2018.

Academic Projects

Wikipedia Analytics with MapReduce | CMU — Fall 2019

- Implemented MapReduce in Hadoop for Wikipedia data (128 GB) and aggregated daily page views for articles.
- Designed MapReduce workflow using AWS Elastic MapReduce (EMR) and used terraform to manage the cluster.

Dynamic Memory Allocator | CMU — Summer 2019

- Designed a fast and efficient general-purpose dynamic memory allocator for C programs.
- Achieved memory utilization of 74.3% by using segregated lists and reducing data structure overhead.

Paraphrase Detection using Deep Learning | NITK — Spring 2018

- Applied paraphrase detection to the medical domain of clinical notes.
- Developed a bidirectional RNN model in Tensorflow with multi-perspective matching and attention mechanism.

Multimodal Medical Image Retrieval | NITK — Spring 2018

- Developed a statistical inference based model with visual topic modeling using Latent Dirichlet Allocation.
- Proposed novel early and late fusion techniques for fusing visual and textual features.
- Late fusion technique outperformed the state-of-the-art on the ImageCLEF 2009 dataset by 12% in terms of mAP.

Skills

Languages and Scripts:	C++, C, Python, Java, C#, HTML, CSS, Javascript, MySQL
Deep Learning Frameworks:	TensorFlow, PyTorch
Cloud Platforms and Tools:	AWS, Azure, Google Cloud Platform, Hadoop MapReduce