Aditya Anantharaman

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Education

Carnegie Mellon University, 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*, Data Science Seminar* (* currently undertaking)

National Institute of Technology Karnataka, Surathkal — Surathkal, India
Bachelor of Technology Information Technology — May 2019
GPA: 9.54/10, *Class Rank:* 6/101
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 the hubness problem in ZSD.
- Outperformed the state-of-the-art in ZSD on the Pascal VOC and MS-COCO datasets.

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 check-in (locking) and check-out (unlocking) of clusters and devised health checks for the maintenance of clusters.
- Built a UI dashboard alongside the service for interacting and reporting.

Publications

- 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

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 the visual and textual features.
- Late fusion technique obtained a higher mAP than the state-of-the-art on the ImageCLEF 2009 dataset

Android Malware Detection | NITK — Spring 2018

- Designed an Autoencoder model for feature compression along with CNN and RNN models in Tensorflow.
- Performed pseudo-dynamic analysis of system API call sequences to generate features.

Dynamic Memory Allocator | CMU — Summer 2019

- Designed a fast and efficient general-purpose dynamic memory allocator for C programs.
- Reduced external and internal fragmentation by using segregated lists and reducing data structure overhead.

Programming Skills

Languages and Scripts:	C++, C, Python, Java, C#, HTML, CSS, Javascript, MySQL
Deep Learning Frameworks:	TensorFlow, PyTorch
Tools:	Android Studio, Django, Git

Achievements and Extra Curriculars

Microsoft code.fun.do Secured 2nd position for developing a smart library management app — 2016

Awards Awarded JN Tata Endowment Scholarship for pursuing higher studies — 2019

Lawn Tennis Winner at All India Inter-NIT Tennis Tournament — 2017 and 2018