Aditya Anantharaman

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Education

Carnegie Mellon University — Pittsburgh, PA
Master of Computational Data Science (MCDS), School of Computer Science — 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: Soft Computing, Design and Analysis of Algorithms, Linear Algebra and Matrices, Computer Vision, Information Retrieval

Experience

Indian Institute of Technology, Hyderabad (IITH) — Hyderabad, India
Research Intern at Visual Learning and Intelligence (VIGIL) lab. — August 2018 - December 2018
Advisor: Dr. Vineeth N Balasubramanian

- 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.
- Model outperformed the state-of-the-art in ZSD on the Pascal VOC and MS-COCO datasets.

Microsoft, R&D — 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, NIPS 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 18.

Selected Projects

Paraphrase Detection using Deep Learning *Tensorflow, Python, NLTK* [Github]
Applied paraphrase detection to the medical domain of clinical notes. Developed a Bidirectional RNN model with multi-perspective matching and Attention mechanism.

Parallel k-means Clustering *OpenMP, MPI, CUDA, C++* [Github]
Employed k-means clustering for Image Colour Quantization and Image Compression. Implemented on 3 platforms - OpenMP, CUDA and MPI with a speedup of order 10^3 in CUDA due to data parallelism.

Android Malware Detection *Tensorflow, Python* [Github]
Designed a Deep Autoencoder model for feature compression along with CNN and RNN based models. Performed pseudo-dynamic analysis of system API call sequences to generate features.

Programming Skills

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

Achievements and Extra Curriculars

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

Awards Awarded JN Tata Endowment Scholarship for pursuing higher studies

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

Organizations Student member at Institute of Electrical and Electronics Engineers (IEEE)