# Aditya Anantharaman

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## Education

**National Institute of Technology Karnataka, Surathkal**
Bachelor of Technology Information Technology                                        Surathkal, India
*GPA: 9.47/10 (6 sems), Class Rank: 6/101*                                   August 2015 - May 2019

**Senior Secondary School**                                                            Bangalore, India
Class 12, CBSE AISSCE *Secured 96 percentage and 99.38 percentile*        June 2013 - March 2015

**Secondary School**                                                                   Hyderabad, India
Class 10, CBSE AISSE *Scored a perfect 10/10 CGPA*                        June 2012 - March 2013

## Research Experience

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

- Developed a novel Multi-Space model for Zero-Shot Object Detection (ZSOD).
- Multi-Space model leverages both semantic and visual spaces to alleviate the hubness problem.
- Model outperforms the previous best in ZSOD on the Pascal VOC dataset.

**Institute of Systems Studies and Analysis, DRDO**                              New Delhi, India
*Summer Research Intern*                                                       May 2017 | July 2017

- Worked on Frequent Itemset Mining using Eclat algorithm for large datasets.
- Extended the Eclat algorithm and developed FT-Eclat for Fault-Tolerant Frequent Itemset Mining.

## Work Experience

**Microsoft, R&D**                                                                   Hyderabad, India
*Software Engineering Intern*                                                  May 2018 | July 2018

- Worked in the Microsoft Azure Networking team and developed a Test Cluster management service.
- Built a UI dashboard for real-time interacting and reporting alongside the service.

## 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 based model with multi-perspective matching and Attention mechanism.

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

**Android Malware Detection** *Tensorflow, Python*                                          [Github]
Classification of android apps done based on pseudo-dynamic analysis of system API Call sequences. Developed a Deep Autoencoder model for feature compression along with CNN and RNN based models.

## Programming Skills

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

## Achievements and Extra Curriculars

**Microsoft code.fun.do hackathon** Secured 2nd position in online round held at NITK Surathkal.

**Lawn Tennis** Winner at All India Inter-NIT Tennis Tournament 2017-18 and Runners up in 2016-17

**Executive Member** Computer Society IEEE-NITK Student Branch, Web Enthusiasts' Club NITK