

# Aditya Ganeshan

RESEARCHER, PREFERRED NETWORKS INC., TOKYO, JAPAN

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## EDUCATION

**Indian Institute of Technology, Roorkee, India**

*Integrated Masters, Applied Mathematics,*

*Jul' 12 - Jul' 17*

Best Masters Dissertation Project: 10/10

**Science Stream , Jawaharlal Nehru School, Bhopal, India**

92% in class XII (C.B.S.E.),

*May' 02 - May' 12*

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## WORK

### EXPERIENCE

#### Project Assistant

*Video Analytics Lab, Indian Institute of Science*

*June '17 - November '18*

- Paper titled **iSPA-Net: Iterative Semantic Alignment Network** on object pose estimation in RGB images to be published in **ACM Multimedia 2018**.

[Link to repository](#)

- Paper titled **Generalizable data-free objective for crafting universal adversarial perturbations**, to be published in IEEE Transactions on **PAMI**, on generating UAP for multiple CV task.

[Link to project page](#)

- Paper Titled **Object Pose Estimation from Monocular Image using Multi-View Keypoint Correspondence** on 3D pose estimation of objects using a multi-view approach to be published in **ECCV-W 2018**.

#### Teaching Assistant

*Video Analytics Lab, Indian Institute of Science*

*June '17 - March '18*

- Teaching Assistant for **DS-265: Deep Learning for Computer Vision**, a 4-month course offered by Department of Computational and Data Sciences, IISc, Bangalore. Held a inclass-Kaggle challenge on a self-created synthetic dataset called **Flying Furnitures**.

[Link to website](#)

- Curated and presented an 11-lecture Course titled **Deep Reinforcement learning in Computer Vision** for lab members. An online repository (and website) consisting of presentations and walk-throughs for many published Computer-Vision Papers which use Deep RL created:

[Link to website](#)

#### Intern

*Video Analytics Lab, Indian Institute of Science*

*Feb '17 - May '17*

- Completed Masters Dissertation titled **Per-Pixel Feedback for Improving Semantic Segmentation**, in collaboration with VAL, IISc and Dept. Maths, IIT-R.

- Received Highest Grade for Dissertation: 10/10.

[Link to project page](#)

#### Data Science Intern

*Hilabs Inc, Mumbai, India*

*May '16 - July '16*

- Created module to reduce categorical levels, using correspondence analysis, and clustering.

- Created module for Time-series analysis, prediction and testing for any given time-based data.

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## GAME

### DEV

#### *A Special Place in Hell*

*BardOfCodes*

*June' 18*

- Created a casual projectile-shooting game with a morbid sense of humour for the Android platform.

[Game on Google Playstore](#)

RESEARCH PROJECTS	<p><b>Seminar on Image Super-Resolution Using Deep Convolutional Networks</b>  <i>IIT Roorkee, India</i> <span style="float: right;"><i>December '16</i></span></p> <p>- Implemented and presented the above paper by Kaiming He et al.  <a href="#">Link to project page</a></p> <p><b>Numerical Approximation for Stochastic Burger's Equation</b>  <i>IIT Roorkee, India</i> <span style="float: right;"><i>Jan '15 - April '15</i></span></p> <p>- DST approved project to solve and visualize turbulence and its effect.  - Solved non-linear terms without adding extra variables and introduced a white noise parameter.  <a href="#">Link to project page</a></p>
PUBLICATIONS	<p><b>Aditya Ganeshan*</b>, Jogendra Nath Kundu*, Rahul M V* , R. Venkatesh Babu,  <i>Object Pose Estimation from Monocular Image using Multi-View Keypoint Correspondence.</i>  Accepted in <i>ECCV-W "Geometry Meets Deep Learning" 2018.</i></p> <p><b>Aditya Ganeshan*</b>, Jogendra Nath Kundu*, Rahul M V*, Aditya Prakash , R. Venkatesh Babu,  <i>iSPA-Net: Iterative Semantic Pose Alignment Network.</i>  Accepted in <i>ACM International Conference on Multimedia 2018.</i>  <a href="#">Link to Arxiv</a></p> <p><b>Aditya Ganeshan*</b>, Mopuri Konda Reddy*, R. Venkatesh Babu,  <i>Generalizable data-free objective for crafting universal adversarial perturbations.</i>  Accepted in <i>IEEE Transactions on Pattern Analysis and Machine Intelligence 2018.</i>  <a href="#">Link to Arxiv</a></p>
POSITION OF RESPONSIBILITY	<p><b>General Secretary,</b>  <i>Music Section, IIT Roorkee</i> <span style="float: right;"><i>May '15 - May '16</i></span></p> <p><b>Finance Coordinator,</b>  <i>Watch Out! News Agency, IIT Roorkee</i> <span style="float: right;"><i>Aug '12 - Aug '15</i></span></p>
GITHUB PROJECTS	<p><b>flying_furniture</b>  Code for creating <i>The Flying Furniture</i> dataset.</p> <p><b>render_wt_pt_proj</b>  Code for Rendering with blender, and 3D keypoints to 2D projection.</p> <p><b>seg_metrics_pytorch</b>  GPU Based Segmentation Metric evaluation in <i>pytorch</i>, for <i>PASCAL VOC'2012</i>.</p> <p><b>universal_pytorch</b>  Batch implementation of <i>DeepFool</i>, and <i>Universal Adversarial Perturbations</i> on <i>pytorch</i>.</p> <p><b>defence_against_the_dark_arts</b>  Evaluation of various defense mechanism against various UAP generation algorithms.</p> <p><b>pytorch_deeplab_large_fov</b>  Implementation of <i>Deeplab Large FOV</i> for semantic segmentation on <i>pytorch</i>.</p>