

Joseph K J

PhD Student, IIT Hyderabad

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Research Interests

Computer Vision, Deep Learning, Machine Learning.

Education

Indian Institute of Technology (IIT), Hyderabad M. Tech + PhD Dual Degree in Computer Science and Engineering Advisor: Dr. Vineeth N Balasubramanian	9.24 / 10 <i>Jan 2017 - present</i>
Government Engineering College (RIT), Kottayam B. Tech. in Computer Science and Engineering	80.43 % <i>May 2013</i>
Loyola School, Trivandrum Indian School Certificate (ISC), Class 12	92.93 % <i>March 2009</i>
Loyola School, Trivandrum Indian Certificate of Secondary Education (ICSE), Class 10	93.00 % <i>March 2007</i>

Research Experience

- **Research Internship, Harada Lab, University of Tokyo, Japan.** June - July 2018
I explored areas related to multi-modal modeling, specifically on generating images that are semantically aligned with textual descriptions about it.
- **Research Assistant, IIT Hyderabad.** Jan 2017 - June 2018.
I worked on Deep Learning based solutions for visual detection and recognition from Unmanned Aerial Vehicles. The research was supported by DRDO, Government of India.

Publications

- 2019 •
 1. K J. Joseph, V. Teja, K. Singh, V. Balasubramanian, Submodular Batch Selection for Training Deep Neural Networks, 28th *International Joint Conference on Artificial Intelligence, IJCAI 2019, Macao, China.* (Accepted for publication)
 2. K J. Joseph, A. Pal, S. Rajanala, V. Balasubramanian, C4Synth: Cross-Caption Cycle-Consistent Text-to-Image Synthesis *IEEE Winter Conference on Applications of Computer Vision, WACV 2019, Hawaii, USA.* [Link]
- 2018 •
 3. K J. Joseph, V. Balasubramanian, MASON: A Model Agnostic Objectness Framework, *International Workshop On Autonomous Navigation in Unconstrained Environments, European Conference on Computer Vision, ECCV-W 2018, Munich, Germany.* [Link]
 4. Pengfei Zhu, Longyin Wen et al., VisDrone-DET2018: The Vision Meets Drone Object Detection in Image Challenge Results, *European Conference on Computer Vision, Workshop Proceedings, ECCV-W 2018, Munich, Germany.* [Link]
 5. K J. Joseph, A. Pal, S. Rajanala, V. Balasubramanian, Zero-Shot Image Generation by Distilling Concepts from Multiple Captions, *Towards Learning with Limited Labels Workshop, International Conference on Machine Learning, ICML-W 2018, Stockholm, Sweden.* [Link]

Work Experience

- **Senior Software Engineer, Oracle Corporation**, July 2016 - Dec 2016.
Developer at Oracle PeopleSoft Cloud Manager product team. Contributed to design, coding, implementation and UX of the product.
- **Software Engineer, Oracle Corporation**, June 2013 - July 2016. As part of Oracle Peoplesoft Platforms team, I handled PeopleTools Push Notification Framework, PeopleTools Automated Configuration Management Framework and PeopleSoft Internet Architecture.

Skills

- Languages: Python, Java, C, JavaScript
- Libraries and Tools: Numpy, Scipy, scikit-learn, OpenCV, Caffe, TensorFlow, PyTorch
- Miscellaneous: Shell Scripting, Dockers, Node.js, Hybrid Mobile App development, Git, ClearCase

Relevant Courses

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| • CS6510 Applied Machine Learning | • CS5350 Bayesian Data Analysis |
| • CS5370 Deep Learning for Vision | • CS6440 Special Topics in Machine Learning |
| • CS6230 Optimization Methods in ML | • CS6010 Advanced Data Structures and Algorithms |

Research Forums Attended

- Conferences: ECCV 2018, ICVGIP 2018, WACV 2019
- International Computer Vision Summer School - **ICVSS 2019**, Sicily, Italy. (Upcoming in July)
- Microsoft Academic Research Summit: 2018, 2019
- Indian Machine Learning and Computer Vision Summer School, 2017.

Service

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| • IEEE CVPR Sub-reviewer: 2019 | • IJCAI Sub-reviewer: 2018, 2019 |
| • IEEE ICCV Sub-reviewer: 2017 | • ICVGIP Reviewer: 2018 |
| • IEEE WACV Sub-reviewer: 2018, 2019 | |

Achievements

- Awarded *Certificate of Appreciation in Research* from IIT Hyderabad in March 2019.
- Awarded cash prize for being top 20% of participants at ‘Summer School on Computer Vision: 2017’, CVIT, IIT Hyderabad.
- Runner up for *Best Student Project Contest 2013* organized by the Computer Society of India, Trivandrum Chapter.
- Placed in top 500 teams globally, in the International IEEE Xtreme Programming Competition, 2010.

Positions / Responsibilities

- Founding Secretary of IEEE Computer Society, RIT Chapter.
- Chief Editor of Click!, the half yearly publication of IEEE Computer Society, RIT Chapter.
- Facilitator at Fun@Work, an Oracle Volunteer initiative.

References

- Dr. Vineeth N Balasubramanian, Associate Professor, Department of Computer Science & Engineering, IIT Hyderabad, Sangareddy, Telangana - 502285, India. E-mail: vineethnb@iith.ac.in
- Dr. Srijith P K, Assistant Professor, Department of Computer Science & Engineering, IIT Hyderabad, Sangareddy, Telangana - 502285, India. E-mail: srijith@iith.ac.in