VIKAS DESAI

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WORK EXPERIENCE

ML Engineer, Qualcomm *Aug 2020 - Current*

Automating deep learning quantization and inference pipelines on Qualcomm android chipsets. Experienced in onboarding state of the art NLP and Computer Vision models.

Research Assistant, IIT Hyderabad *Aug 2017 - Aug 2020*

I worked under the guidance of Dr. Vineeth N Balasubramanian on using active learning to minimize labeled data requirements for object detection. Published **12 papers** [174 citations as of Sept. 2022].
Internships at: AIST Tokyo, University of Tokyo

TECHNICAL STACK

Frameworks	PyTorch, Keras, Flask
Libraries	Scikit-learn, Numpy, OpenCV, Matplotlib, Pandas
Languages	Python, C++, Java, Bash Scripting
Web Technologies	HTML, CSS, Javascript
Misc. Tools	Git, LaTeX, Jenkins
Expertise	CNNs, Active Learning, Image Classification, Object Detection, Transformers, Semantic Segmentation, Pose Estimation

EDUCATION

Indian Institute of Technology (IIT), Hyderabad *Aug 2017 - July 2020*
Master of Technology CGPA: 9.52
Department of Computer Science and Engineering *Supervisor: Vineeth N Balasubramanian*

Sreenidhi Institute of Science and Technology *June 2013 - June 2017*
Bachelor of Technology Overall Percentage: 82.6%
Department of Electronics and Communication Engineering

SELECTED PROJECTS

Adaptive Supervision for Object Detection *Jan 2019 - Apr 2019*
In collaboration with University of Tokyo

Developed a novel adaptive supervision framework for active learning in object detection. A combination of weak and strong supervision is used to obtain 30% savings in annotation cost to attain a target performance level.

Edge Computing Toolkit for Real-Time Plant Phenotyping *Jun 2020 - Aug 2020*

Created EasyRFP, a software toolkit which can be interfaced with any commercial GPU enabled micro computer (such as NVIDIA Jetson) and a digital camera. It automatically performs deep learning inference on field images and periodically emails the results.

SELECTED PUBLICATIONS

1. **S. V. Desai**, V. Balasubramanian, Towards Fine-Grained Sampling for Active Learning in Object Detection, Visual Learning with Limited Labels, **CVPR 2020 Workshops**, Seattle, USA.
2. **S. V. Desai**, Akshay L. Chandra, V. Balasubramanian, An Adaptive Supervision Framework for Active Learning in Object Detection, British Machine Vision Conference, **BMVC 2019**, Cardiff, UK.