

# VIKAS DESAI

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## SUMMARY

A results-driven data science expert with 3 years of experience in ML Engineering and 3 years in Computer Vision academic research. Seeking a dynamic team to tackle complex machine learning and software engineering challenges.

## EDUCATION

**Master of Computer Science**, Indian Institute of Technology Hyderabad 2017 - 2020  
CGPA: 9.52, Field of Research: Deep Learning for Computer Vision

**Bachelor of Technology**, Sreenidhi Institute of Science and Technology 2013 - 2017  
Percentage: 82.6%, Major: Electronics and Communication Engineering

## SKILLS

<b>Web Technologies</b>	React, Flask, HTML, CSS, Javascript
<b>Data Science</b>	PyTorch, Keras, Scikit-Learn, Numpy, OpenCV, Pandas, Matplotlib
<b>Languages</b>	Python, C#, C++, Java, Bash, Powershell
<b>Dev Tools</b>	Git, L <sup>A</sup> T <sub>E</sub> X, Jira, Confluence, Jenkins,
<b>ML Expertise</b>	CNNs, Active Learning, Semantic Segmentation, Object Detection, Transformers

## EXPERIENCE

**Senior ML Engineer** Jul 2020 - Present  
Qualcomm *Hyderabad, India*

- **Neural Engine:** Currently responsible for the upkeep of advanced deep learning models on Qualcomm Neural Engine for Android. Taking ownership of a comprehensive suite of computer vision & NLP evaluation metrics.
- **Microsoft on Snapdragon:** Enhancing and monitoring the performance of new-age generative models on Snapdragon chipsets for Microsoft Surface laptops. Responsible for assessing the quality and reliability of Docs.
- **Leadership:** Mentored three amazing undergrad students during their internship at Qualcomm AI. Provided effective guidance via one-on-one meetings during their ramp-up, day to day activities and project deliverables.

## PROJECTS

**Adaptive Supervision for Object Detection.** 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 mean average precision (mAP) performance level. *In collaboration with University of Tokyo.*

**Rice Heading Stage Estimation using Deep Learning.** Developed a novel pipeline for the detection of regions containing flowering panicles from ground level RGB images of paddy rice. Used the flowering panicle region counts to estimate the heading date of the crop with a MAE less than 1 day. *During an internship at University of Tokyo.*

## PUBLICATIONS

1. **S. V. Desai**, V. Balasubramanian, Towards Fine-Grained Sampling for Active Learning in Object Detection, Visual Learning with Limited Labels Workshop, **co-located with CVPR 2020 Conference**, 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. (*28% acceptance rate*)

## ACHIEVEMENTS

- (2021) Recipient of the ORION award for outstanding contributions to the Qualcomm Neural Engine SDK.
- (2020) Published [12 research papers](#) in the field of active learning for computer vision, with 250+ citations.