

Siddeshwar 'Sid' Raghavan

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EDUCATION

Purdue University

(Incoming) Ph.D., Electrical and Computer Engineering

West Lafayette,
Indiana

Jan 2022

University of Wisconsin-Madison

Master of Science (Research) in Electrical Engineering
GPA 3.68/ 4.00

Madison, Wisconsin
Sep 2019 - May 2021

PSG College Of Technology

Bachelor of Engineering in Electronics and Communications
GPA 8.23/ 10.00

Coimbatore, India
Jul 2014 - May 2018

RESEARCH AND INDUSTRIAL EXPERIENCE

Honorary Research Scholar - University of Wisconsin-Madison (advised by Prof. Kassem Fawaz)

Designing and developing computer vision object detection systems for adversarial attack testing.

Madison, Wisconsin
Sept 2021 - Dec 2021

Python, PyTorch,

Independent Research Student - University of Wisconsin-Madison (advised by Prof. Yin Li)

1. Designed and developed a pipeline for ground truth image generation in GUI-less Blender using Python for Non-Line of Sight Imaging system

Madison, Wisconsin
Dec 2019 - May 2021

2. Developed a computer vision system for regressing and **reconstructing intensity images from NLOS** measurements using 2D/ 3D ResNet deep learning models with a PSNR of 22.7 dB.

3. Captured the largest real-time NLOS dataset with human subjects and physical objects.

4. Developed and tested a Computer Vision and Deep Learning-based **2D NLOS Human Pose Estimation** using a hybrid CNN and LSTM network with an MLP head to predict and reconstruct the human poses from the time series input sequence.

Python, PyTorch,
Blender

Engineering Intern - Adori Labs

1. Developed a Voice Assistant for the in-house built Adori Player

2. Built and released Google Home Actions and Amazon Alexa Skills for the Adori platform.

Bangalore, India
Sept 2018 - May 2019
Swift

Research Intern - IIT, Bombay (advised by Prof. Rajbabu Velmurugan)

Developed a computer vision system for VSLAM. Identified markers and distance of the markers from the video captured by a single camera rather than the conventional multi-camera approach using Python and OpenCV.

Mumbai, India
Jun 2017 - Jul 2017

Python, OpenCV

Research Intern - IIT, Madras (advised by Prof. Ashok Jhunjunwala)

Designed and built a State Of Health tester to dynamically measure the state of the battery.

Chennai, India
Jun 2016 - Jul 2016

C++

TEACHING EXPERIENCE

Graduate Teaching Assistant - University of Wisconsin-Madison

Graduate Teaching Assistant for ECE 352 - Digital Fundamental Systems

Helped students with in-class assignments, homework, and project questions. Developed grading frameworks and graded student exams/ assignments.

Madison, Wisconsin
Jan 2021 - May 2021

PUBLICATIONS/ PROJECTS

[Towards Non-Line-Of-Sight-Photography](#)

Preprint submitted to the archives (arXiv)

[SpaceNet 7](#) - Challenge involves segmenting and tracking tiny, dense building footprints over time from satellite images. Implemented VGG-16, ResNet-50, DenseNet-121, and YoloV4 with a UNET decoder for semantic segmentation. Finished within the top 7 percentile of participants.

[SpaceNet 6](#) - Challenge involves segmenting building footprints from SAR (Synthetic Aperture Radar) images using Deep Learning and Computer Vision models. Finished within the top 50 percentile of participants.

SKILLS

- **Languages:** Python, SQL, Java, Matlab, LaTeX, C++, Linux
- **Developer Tools:** Jupyter Notebooks, Git, Google Cloud Platform, VS Code, Amazon AWS, Blender, Unity 3D, Docker
- **Library:** PyTorch, Pandas, NumPy, OpenCV, Tensorboard
- **Art Studio:** [Atelierofsid](#)