Siddeshwar 'Sid' **Raghavan**

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EDUCATION

Purdue University — West Lafayette, Indiana
(Incoming) Ph.D., Electrical and Computer Engineering — Jan 2022

University of Wisconsin-Madison — Madison, Wisconsin
Master of Science (Research) in Electrical Engineering — Sep 2019 - May 2021
GPA 3.68/ 4.00

PSG College Of Technology — Coimbatore, India
Bachelor of Engineering in Electronics and Communications — Jul 2014 - May 2018
GPA 8.23/ 10.00

RESEARCH AND INDUSTRIAL EXPERIENCE

Honorary Research Scholar - ***University of Wisconsin-Madison (advised by Prof. Kassem Fawaz)*** — Madison, Wisconsin, Sept 2021 - Dec 2021

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

Python, PyTorch,

Independent Research Student - ***University of Wisconsin-Madison (advised by Prof. Yin Li)*** — Madison, Wisconsin, Dec 2019 - May 2021

1. Designed and developed a pipeline for ground truth image generation in GUI-less Blender using Python for Non-Line of Sight Imaging system
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*** — Bangalore, India, Sept 2018 - May 2019
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.

Swift

Research Intern - ***IIT, Bombay (advised by Prof. Rajbabu Velmurugan)*** — Mumbai, India, Jun 2017 - Jul 2017

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.

Python, OpenCV

Research Intern - ***IIT, Madras (advised by Prof. Ashok Jhunjhunwala)*** — Chennai, India, Jun 2016 - Jul 2016

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

C++

TEACHING EXPERIENCE

Graduate Teaching Assistant - ***University of Wisconsin-Madison*** — Madison, Wisconsin, Jan 2021 - May 2021

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.

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 imag
VGG-16, ResNet-50, DenseNet-121, and YoloV4 with a UNET decoder for semantic segmentation. Finished within the to
participants.

SpaceNet 6 - Challenge involves segmenting building footprints from SAR (Synthetic Aperture Radar) images using De
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