

SRISHTI YADAV

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GitHub: <https://github.com/copperwiring>

I am a machine learning engineer with an expertise in computer vision based applications. I am pursuing research at Simon Fraser University on kernel based tracking in images and have experience in implementing machine learning algorithms at scale.

SKILLSET

Software: MATLAB, Octave

Languages and Tools: PyTorch, TensorFlow, Python, Numpy, Scipy, OpenCV, Matplotlib, GDAL as well as AWS cloud services like S3, EC2 and Amazon Sagemaker

EDUCATION

Simon Fraser University, Canada

Master of Applied Science, January 2018- Present

CGPA: 3.92/4.33

JSS Academy of Technical Education, Noida, India

Bachelor of Technology, Electronics and Communication, June 2016

PROJECTS

Deep Attention Models for Human Tracking Using RGBD:

- Worked in a team of 4 to develop an adaptive appearance model to accurately detect color camouflage, even in the presence of complex natural objects.
- Improved the accuracy by approximately 50% and reduced the type I error by 23% and type II error by 5%.

Celestini Project India:

- Developed a prototype video analytic algorithm using Caltech pedestrian dataset to run on Raspberry Pi 3 Model B.
- Worked in a team of two where I was responsible for porting the code from MATLAB to Octave. Also, worked on pre-processing the data to clean images, remove noise to infer position, lane and density of vehicles in front of the camera.

Prototype Landslide Risk Communication System:

- Developed a system which forecasts and communicates occurrence of landslides.
- Conducted field survey and implemented a system for sensor deployment (sensors, microcontroller boards, GSM module etc).

EXPERIENCE-INDUSTRY

Machine Learning Intern

February 2020-August 2020

UrtheCast, Vancouver, Canada

- As part of R&D team, I solely implemented machine learning system for satellite data (Landsat8, SPARCS, Sentinel 2 dataset) for multi-class prediction of cloud, shadow and haze.
- Implemented data ingestion pipeline which takes in raw geospatial multi-dimensional data as input and converts it into standardized format.
- Scaled the algorithm using AWS cloud based services, example, EC2 for deployment server, S3 for data storage and docker for creating virtual environment and parallel deployment of multiple training jobs.
- Investigated and implemented optimization methods to improve cloud mask generation from S2 data using the Green, Red Edge, and Water Vapor band.

Robotics Intern April 2016-June 2016
Omnipresent Robot Tech, Delhi, India
Worked in the domain of robotics, tracking with Arduino, OpenCV & C++, and intelligent electronics. The project included Speedobotix, an Arduino-based robot.

EXPERIENCE-RESEARCH **Graduate Research Assistant** Jan 2018-present
Networked Robotics and Sensing Laboratory
School of Applied Science, Simon Fraser University, Canada

Project Associate August 2017-November 2017
Helicopter and VTOL Laboratory
Department of Aerospace Engineering,
Indian Institute of Technology Kanpur, India

Research Intern May 2017-July 2017
Samsung IoT Innovation Lab
Department of Electrical and Computer Science,
Indian Institute of Technology Delhi, India

Research Intern June 2016-April 2017
Applied Cognitive Science Lab
School of Computing and Electrical Engineering,
Indian Institute of Technology Mandi, India

PUBLICATIONS **Book Chapter**
Chaturvedi, P., Thakur, K., Mali, N., Kala, V. U., Kumar, **S.**, **Yadav**, S. & Dutt, V. (2017). A Low-Cost IoT Framework for Landslide Prediction and Risk Communication. In CRC Press: Internet of Things Concepts, Technologies, Applications, and Implementations (2017)

Journals
Rasoulidanesh, M., **Yadav**, **S.**, Herath, S., Vaghei, Y., & Payandeh, S. (2019). Deep Attention Models for Human Tracking Using RGBD. Sensors, 19, 750.

Selected for poster at **WiML Workshop, NeurIPS 2019**

Conferences

Yadav, **Srishti** & Payandeh, Shahram. (2018). Real-Time Experimental Study of Kernelized Correlation Filter Tracker using RGB Kinect Camera. IEMCON.2018.

Naresh, M. , Chaturvedi, P. , **Yadav**, **S.** , Dutt, V. , Uday, K. V. (2017). 'Training of Sensors for Early Warning System of Rainfall Induced Landslides'. World Academy of Science, Engineering and Technology, International Science Index, Geotechnical and Geological Engineering, 11(12), 373.