

## Contact

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krshrimali.github.io (Portfolio)

## Top Skills

Computer Vision  
Research  
Machine Learning

## Languages

Hindi  
English

## Honors-Awards

Best Ambassador of the Month

## Publications

UAV-Robot Relationship for  
Coordination of Robots on a  
Collision Free Path

# Kushashwa Ravi Shrimali

Software Developer (AI) at care.ai™ | Previously at NVIDIA (US),  
NTU Singapore (ROSE) | IIIT NR B.Tech CSE ('16-'20)  
Jaipur

## Summary

I'm a CSE Undergrad ('20) at IIIT NR, India. I'm currently working at CareAI (a healthcare startup based in Florida, US) as a SDE Intern (AI).

I've previously worked as a SDE (PyTorch Dev Team) intern at NVIDIA (HQ Santa Clara, US), R&D Intern (Deep Learning) at ROSE Labs (NTU Singapore), CV & ML intern at Big Vision LLC under Dr. Satya Mallick (also wrote a few blogs on LearnOpenCV) and Research Intern at IIITM Gwalior under Prof Anupam Shukla.

Most of my work is open-sourced at my GitHub Profile (<https://github.com/krshrimali>). I regularly contribute to PyTorch (please see: <https://github.com/pytorch/pytorch/pulls/krshrimali>) and have contributed before to OpenCV (please see: [https://github.com/opencv/opencv\\_contrib/pulls?q=is%3Apr+author%3Akrshrimali+is%3Aclosed](https://github.com/opencv/opencv_contrib/pulls?q=is%3Apr+author%3Akrshrimali+is%3Aclosed)). I love writing efficient and impactful codes.

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## Experience

care.ai™

Software Developer (AI)  
April 2020 - Present (5 months)

NVIDIA

Software Engineer Intern  
January 2020 - April 2020 (4 months)  
Santa Clara, California

Worked as a SDE Intern in the PyTorch DL Frameworks Team at NVIDIA (HQ: Santa Clara, US). My work was mostly focused on enabling type promotion for Unary Ops for both CUDA and CPU devices. The target was to prevent extra kernel launches by doing the type promotion inside the TensorIterator of PyTorch. The tasks also included fixing bugs in PyTorch (CUDA related),

and adding explicit dtype argument to Unary Ops (which will help easy type promotion for our AMP Pull Request).

The work was done under mentorship of Michael Carilli (Senior Software Developer, NVIDIA), Piotr Bialecki (Senior Software Developer, NVIDIA) and my manager Christian Sarofeen. Most of the work was also done with the help of awesome people at Facebook (PyTorch Team): Michael Ruberry, Natalia, Will Feng and more.

The work heavily used C++, CUDA and Python (to write tests).

I also contributed to PyTorch actively during my internship (and after as well). Please take a look at the PRs specific to my time at NVIDIA:

1. Enabling Type Promotion: <https://github.com/pytorch/pytorch/pull/33322>
2. Adding dtype arguments to the Unary Ops for explicit type promotion: <https://github.com/pytorch/pytorch/pull/33063>
3. Fix torch.prod: <https://github.com/pytorch/pytorch/pull/32831>

Please take a look at: <https://github.com/pytorch/pytorch/pulls/krshrimali> if you want to look at my contributions to PyTorch.

## Rapid-Rich Object Search Lab (ROSE)

Visiting Researcher

May 2019 - July 2019 (3 months)

NTU Singapore

Joined as a Visiting Researcher at ROSE Labs, NTU Singapore, under supervision of Professor Alex Kot (Director, ROSE Labs) and Dr. Dennis Sng (Deputy Director, ROSE Labs).

Worked on License Plate Detection and Recognition using YOLOv3 based network. Target on detecting and recognizing characters for Double License Plates and on realtime dataset.

Work involved multiprocessing to generate synthetic dataset for training custom ALPR.

## Big Vision LLC

Computer Vision and Machine Learning Intern

March 2018 - May 2019 (1 year 3 months)

## California

Started working as an intern at Big Vision LLC under Dr. Satya Mallick, founder of learnopencv.com, TAAZ and Big Vision LLC.

Field: Computer Vision and Machine Learning.

Technical blogs written:

1. Image Quality Assessment (using BRISQUE, a No-Reference Techniqiue): <https://www.learnopencv.com/image-quality-assessment-brisque/>
2. Face Averaging (Application-based): <https://www.learnopencv.com/average-faces-of-fifa-world-cup-2018/>
3. SVM using Scikit-Learn (in Python): <https://www.learnopencv.com/svm-using-scikit-learn-in-python/>
4. Convex Hull using OpenCV in C++ and Python: <https://www.learnopencv.com/convex-hull-using-opencv-in-python-and-c/>
5. Code for PyTorch Image Classification (Transfer Learning) using PyTorch: <https://www.learnopencv.com/image-classification-using-transfer-learning-in-pytorch/>

Programming Languages used: C#, C++, Python, JavaScript

## IIIT-Naya Raipur

SAC Science and Technology Head  
November 2018 - March 2019 (5 months)

IIIT Naya Raipur

Coordinated clubs running under SAC:

1. AIML ([facebook.com/aiml.IIITNR/](https://facebook.com/aiml.IIITNR/))
2. TSoC (The Society of Coders)

Technical Coordinator of Technical and Cultural Fest - TechNovate 2019.

## Technovate IIIT-NR

Event Coordinator  
March 2018 - March 2018 (1 month)

## IIIT Naya Raipur

Headed Machine Learning and Data Science event, along with Krutika Bapat (B.Tech CSE Undergraduate, IIIT Naya Raipur).

## SCiNTiFiC - Science Exhibition

Lecturer (Volunteer)

February 2018 - February 2018 (1 month)

IIIT Naya Raipur

Gave lecture on importance of Computer Science Education, to the students of high-school, of Chhattisgarh.

## IIIT Gwalior

Winter Research Internship (Deep Learning and AI)

December 2017 - January 2018 (2 months)

Gwalior

Internship on Multi-Agent Systems, Deep Learning Models at IIIT Gwalior, under Professor Dr. Anupam Shukla. Also focused to learn Hybrid Models developed in the labs of IIIT Gwalior.

Algorithms like A\* Search, Probabilistic Distance, and Genetic were modeled, studied and learned. Project was done and implemented using Python, having multiple robots and multiple goals currently in a static environment, future goal being - for dynamic environment.

## OpenStudy.com

Ambassador

June 2013 - June 2017 (4 years 1 month)

Newsletter Programme Leader, Designer.

OpenStudy, an online educational platform for the students to get their doubts cleared, interactively. It has quite a lot users, and is now occupied by Brainly. The task, as an ambassador, was to guide the new users towards the rules, the starting steps etc.

## Geek Winky

Technical Content Writer

November 2016 - December 2016 (2 months)

Raipur

Technical Content Writer.

Blog post: <http://www.geekwinky.in/2016/11/handling-linux-files-in-windows.html>

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## Education

International Institute of Information Technology Naya Raipur  
Bachelor's Degree, Computer Science · (2016 - 2020)

Kendriya Vidyalaya STPS  
High School, CBSE - Science Stream · (2009 - 2016)