

# Adrish Dey

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## EDUCATION

**NETAJI SUBHASH ENGINEERING COLLEGE**  
B.TECH - COMPUTER SCIENCE AND  
ENGINEERING  
Expected May 2021 | Kolkata, India  
CGPA (4 Semesters): 7.16 / 10

**GURUDAS TARASUNDARI INSTITUTION**  
Grad. May 2017 | Berhampore,  
Murshidabad, India  
WBCHSE: 82.4%

**MARY IMMACULATE SCHOOL**  
Grad. May 2015 | Berhampore,  
Murshidabad, India  
ICSE: 94.33%

## LINKS

Github:// [captain-pool](#)  
LinkedIn:// [captain-pool](#)  
YouTube://  
[UCc6GiWDMPOuCDhngnLVZrw](#)  
Twitter:// [@captain\\_pool](#)

## TEACHING AND MENTORING

**MACHINE LEARNING TRAINER | I&WE**  
Jun 2019 - Jul 2019 | Kolkata  
Provided mandatory Industrial Training to a  
group of 43 Final Year students on Machine  
Learning with TensorFlow.

**MENTOR @ GOOGLE CODE IN 2019 |  
TENSORFLOW**  
2nd December 2019 - April 2020 | Online  
Invited to Mentor Students from age 13 - 17, to  
work open source with the TensorFlow Team as  
part of Google Code In 2019  
(<https://g.co/gci>)

**CODING MENTOR | ZOO HACKATHON**  
9th - 10th November | Kolkata  
Invited by Bengal Chamber of Commerce and  
US Consulate Kolkata to mentor participating  
teams for Zoo Hackathon.

## SKILLS

### PROGRAMMING

Work Experienced

- Python • C#
- Shell • C++

Familiar:

- MySQL • Linux Kernel API
- Arduino • PHP
- Javascript • HTML5/CSS

## EXPERIENCE

**APPLIED RESEARCH INTERN | REPHRASE.AI**  
December 2019 - Present | Bangalore, Karnataka

- Working on building Levenberg-Marquardt Optimizer, optimized for handling sparse Jacobians, required by the core feature extractor.
- Working on lip expression translation between unpaired expression vectors, using adversarial training on cycle consistency.

**GOOGLE SUMMER OF CODE STUDENT | TENSORFLOW**  
May 2019 - August 2019 | Online

- Implemented and trained Enhanced Super Resolution GAN (<https://arxiv.org/pdf/1809.00219.pdf>) to export to <https://tfhub.dev>
- Implemented GAN Distillation on ESRGAN to reduce inference time, and built a Proof of Concept media player which performs video frame Super Resolution @ 5 Frames per second.

More of the project description can be found here.

<https://github.com/captain-pool/GS0C>

<https://summerofcode.withgoogle.com/projects/#4662790671826944>

References:

- <https://github.com/tensorflow/datasets/pulls?q=is%3Apr+author%3Acaptain-pool>
- <https://github.com/tensorflow/tensorflow/pulls?q=is%3Apr+author%3Acaptain-pool>
- <https://github.com/tensorflow/hub/pulls?q=is%3Apr+author%3Acaptain-pool>

**COMPUTER VISION AND MACHINE LEARNING INTERN | COVICAS - I&WE**

January 2019 - March 2019 | Kolkata, India  
Building a Face Recognition based security system, running on a distributed network of Raspberry Pi.

## AWARDS

2019	2958 <sup>th</sup> Global	Google Hash Code 2019
2018	National	NASA SpaceApps Challenge Finalist
2018	2 <sup>nd</sup> /150 teams	NASA SpaceApps Challenge Regional
2018	Regional	ACM Kolkata Chapter B.Tech Awards Finalist

## PROJECTS

### PASSGRUGAN

Built, PassGRUGAN a Generative Model for generating passwords which uses GRU Units to capture the Temporal Dependency which PassGAN by Hitaj et.al failed to capture. A linear combination of Wasserstein Loss and gradient penalty was used to calculate the difference between the generated probability distribution and the actual probability distribution of the data, while restricting the gradients from vanishing or exploding. This project got accepted for final presentation at B.Tech Project Awards, 2018 organized by ACM chapter of Kolkata, India.

### SHADOW FIGHTERS | HACKATHON

Created an Unity 3D VR Game, with a team of 4 members at HackInTheNorth. This Game connects with the PC Webcam and uses In Browser Tensorflow.JS to estimate human pose and Shadow Fight in the Virtual World, without the need for any Extra Hardware.

<https://github.com/subzero-hackinthenorth>

### 6.042 RULES! | WEBSITE

Built, 6.042 Rules!, a free online course for MIT's 6.042J Class, coordinated by students who have taken this class. Around 300 students from around the globe registered for this course, during its lifetime. We got acknowledged by the creator of the course, Professor Frank Thompson Leighton.

<https://github.com/captain-pool/6.042-Rules-Website>