

# Shreyas Bapat

<https://shreyasb.com>

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## EDUCATION

### INDIAN INSTITUTE OF TECHNOLOGY MANDI

B.TECH. IN ELECTRICAL  
ENGINEERING

Expected Jun 2020 | Mandi, India  
Cum. GPA: 7.55

### MISS HILL H. SEC. SCHOOL CLASS XII

Grad. March 2016 | Gwalior, India  
Central Board of Secondary  
Education  
Percentage : 93.4%

### KENDRIYA VIDYALAYA NO. 1 CLASS X

Grad. March 2014 | Gwalior, India  
Central Board of Secondary  
Education  
CGPA : 10

## LINKS

GitHub:// [shreyasbapat](https://shreyasbapat)

Links to Projects:

<https://shreyasb.com/links.html>

LinkedIn:// [shreyasbapat](https://shreyasbapat)

## COURSEWORK

### UNDERGRADUATE

Pattern Recognition  
Artificial Intelligence  
Data Structures and Algorithms  
Communicating Distributed Processes  
Computer Organisation  
Signals and Systems

## SKILLS

### PROGRAMMING

Python • C++ • C • Flutter

### WEB DEVELOPMENT

Flask • Dash • CSS3 • HTML

Sphinx • Django

### TOOLS/MARKUP

pipenv • Docker • git • virtualenv  
numba • Keras •  $\LaTeX$  • ReStructured Text

## AWARDS

KVPY Scholar 2016-17

Inter IIT Tech Meet - 3rd/23 (SCI)

Mentor @ Astronomy Code Camp Delhi

## INTERESTS

Deep Learning  
Data Visualisation  
Astrodynamics  
Software Development

## WORK EXPERIENCE

### SIEMENS | SOFTWARE RESEARCH INTERN

Dec 2019 - Feb 2019 | Bengaluru, India

- Using generative models for test data generation. Exploring active learning for automatic data labelling.
- Implementing CycleGAN for style transfer of images.
- Implementing MUNIT for style transfer and comparison of both the approaches.
- Implementing StyleGAN for generating random data.

### ANKAM | DEEP LEARNING INTERN

Aug 2018 - Nov 2018 | Mandi, India

- Implementing transfer learning to classify images of human eyes using ResNet50 for Diabetic Retinopathy Detection.

### POLIASTRO | SOFTWARE DEVELOPMENT INTERN

May 2018 - Aug 2018 | Mandi, India

- Implemented interactive 2D plotting, refactoring the plotting module to create backends and orbit simulation. Fixed hyperbolic orbits.
- Developed module being used by scientists in ESA (European Space Agency) to simulate orbits of various objects in space.

## PUBLICATIONS

### PROJECTHIKO 1.0 - THE VOICE AND INTERNET ENABLED SMART HOME | Co-AUTHOR

June 2017 | IJETSR ISSN: 2394-3386

Cost Reduction in home automation. Used flask for handling backend.  
Implemented Speech Recognition.

## PROJECTS

### EGO-NONEGO VIDEO DETECTION | UNDERGRADUATE RESEARCH

Feb 2018 - May 2018 | Mandi, India

- Video Classification on the basis of position of camera.
- Implemented a Autoencoder to create Optical Flows by taking video frames. Used ResNet50 for classification.
- Technologies Used: Python, matplotlib, MATLAB, Keras, Tensorflow.

### FABRIC DETECTION | UNDERGRADUATE RESEARCH

Nov 2017- Jan 2018 | Mandi, India

- Implemented Transfer Learning to train an encoder to reduce dimensions of microscopic fabric images.
- Used Fully Connected Layers to classify the bottlenecks. Used tSNE to cluster the various classes. Technologies Used: Python, Keras.

### EINSTEINPY/EINSTEINPY | LEAD DEVELOPER

Dec 2018 - Present | Mandi, India

- Author of a Python Library, EinsteinPy - a library for computations related to general relativity and geodeic equations. Solving schwarzschild geometry in minutes!
- Published as a Pypi Package.

## RESPONSIBILITIES

### CO-ORDINATOR | SPACE TECHNOLOGY AND ASTRONOMY CELL

June 2017 - May 2018 | Mandi, India

Awarded as Best SnTC Coordinator for 2018-19.