

Shreyas Bapat

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EDUCATION

INDIAN INSTITUTE OF TECHNOLOGY MANDI

B.TECH. IN ELECTRICAL ENGINEERING

Expected Jun 2020 | Mandi, India

Cum. GPA: 7.34

- Awarded a Travel Grant to Attend Python in Astronomy 2019 in USA.

LINKS

GitHub:// [shreyasbapat](#)

LinkedIn:// [shreyasbapat](#)

COURSEWORK

UNDERGRADUATE

Deep Learning and it's Applications

Pattern Recognition

Artificial Intelligence

Data Structures and Algorithms

System Practicum

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

High Performance Computations

Astrodynamics

Software Development

WORK EXPERIENCE

SIEMENS | SOFTWARE RESEARCH INTERN

Jun 2019 - Jul 2019 | Bengaluru, India

- Benchmarking performance of CycleGAN and MUNIT for Deep Style Transfer Learning.
- Implementing Coverage guided Fuzzing for Deep Neural Networks.
- Development of modules for finding Coverage of a network and implementing GradCAM (Class Activation Maps).

SIEMENS | SOFTWARE RESEARCH INTERN

Dec 2018 - 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.
- Comparison of results between CycleGAN and MUNIT for same set of 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 | IJETS 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 geodesic 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.