

SHREYAS BAPAT

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EDUCATION

Indian Institute of Technology Mandi

B.Tech. in Electrical Engineering

Overall GPA: 7.3

August 2016 - Present

PUBLICATIONS

ProjectHiko 1.0 - The Voice and Internet Enabled Smart Home

June 2017

Shreyas Bapat et.al.

IJETSR ISSN: 2394-3386

- Cost Reduction in home automation. Complete set of home automation with fairly interactive voice assistant, and a web based interface under \$40.

EXPERIENCE

Siemens Technology and Services Pvt. Ltd.

Software Research Intern

June 2019 - Present

Bengaluru, India

- Benchmarking CycleGAN and MUNIT against similar problem and finding the benefit of Cycle Consistency Loss.
- Working on solution to find coverage of a Neural Network.
- Exposing Heat Maps of a Neural Network Model.
- Implementing GradCAM to find Class Activation Maps of Object Detection Models for cause of Explainable AI

Siemens Technology and Services Pvt. Ltd.

Software Research Intern

December 2018 - February 2019

Bengaluru, India

- Using generative models for test data generation. Exploring active learning for automatic data labelling.
- Understanding and exploring best approaches for style transfer of images.
- Using cycle consistency loss (CycleGAN) for style transfer due to lack of paired data. Understanding the convergence criteria of CycleGAN..

Ankam

Deep Learning Intern

August 2018 - November 2018

Remote

- Implementing transfer learning to classify images of human eyes using ResNet50 for Diabetic Retinopathy Detection.
- Using regression models to predict various characteristics of a person from Retina images.
- Creating a scalable web-app to take image input and show results using Docker Swarm.

poliastro - OpenAstronomy

Deep Learning Intern

May 2018 - July 2018

Remote

- Implemented interactive 2D plotting, re factoring the plotting module to create backends and orbit simulation. Fixed hyperbolic orbits.
- Developed a module for DASTCOM5 being used by scientists in ESA (European Space Agency) to simulate orbits of various objects in space.

PROJECTS

EinsteinPy : Python in General Relativity

Shreyas Bapat et.al.

Drafted

AAS APJ

- Introduction to EinsteinPy 0.2.0. Description of EinsteinPy and how computations are done.
- Description of relativistic orbit simulation, for Schwarzschild, Kerr and Kerr-Newman black holes. Geodesic computations and symbolic calculations of General Relativity.

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TECHNICAL STRENGTHS

Computer Languages	Python, C, C++, Rust, Erlang, Go, Dart, Lua
Frameworks	Flask, Django, Dash, NodeJS, Pytorch, Keras
Protocols & APIs	XML, JSON, SOAP, REST
Databases	MySQL, PostgreSQL
Tools	Docker, Nginx, nano, vim

POSITIONS OF RESPONSIBILITIES

Debian

Maintainer of Debian Astro Team

April 2019 - Present

Debian Astro Pure Blend

- Packaging new softwares related to Debian Astro Pure Blend.
- Actively maintaining softwares and packaging them for Debian/Ubuntu/Mint.
- Packaging EHTImaging (Software used to generate Black Hole Image in 2019) with MIT CSAIL.

European Space Agency

Organisation Admin and Project Mentor SOCIS 2019

June 2019 - September 2019

The EinsteinPy Project

- Mentored a student throughout the summer for a Summer of Code project.
- Organized and managed the whole EinsteinPy Organization for ESA's Summer of Code in Space.

Space Technology and Astronomy Cell

Co-ordinator

June 2017 - June 2018

SnTC, IIT Mandi

- Awarded as the best technical society coordinator of the year 2017-18.