

Shreyas Bapat

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Education

IIT Mandi(Indian Institute of Technology Mandi)

Mandi, India

B.TECH. IN ELECTRICAL ENGINEERING

Aug. 2016 - PRESENT

- CGPA : 7.51/10
- Got an award for valuable contribution in Technical Society at IIT Mandi (SnTC).

Skills

Programming Python, C/C++, shell, NASM, Erlang, JavaScript, Dart(Flutter), MySQL
Web Flask, Dash, HTML5, ,CSS3, Materialize, JavaScript, Django
Markup \LaTeX , Markdown, ReStructured Text, YAML
Technologies git, mercurial, PyCharm, plotly, matplotlib, Tensorflow, Keras, numba JIT

Publications

Projecthiko 1.0 - The Voice and Internet Enabled Smart Home

IJETS- ISSN 2394 3386

AUTHOR

Volume 4, Issue 6 | June 2017

- Devised a very cheap and efficient way of making a home smart.
- Used Flask and HTML to create a web interface for handling the resources in home.
- Implemented the Google Speech API to access the voice inputs of the user.

Experience

Poliastro - OpenAstronomy

Barcelona, Spain

SOFTWARE DEVELOPMENT INTERN

May 2018 - Ongoing

- Worked for the 0.10 release of poliastro.
- Restructured the whole plotting module and created two different backends for plotting. One using plotly and the other using matplotlib.
- Created a class for 2D plotting using plotly. This created interactive 2D plotting for orbits.

Indian Institute of Technology Mandi

Mandi, India

TEACHING ASSISTANT

Feb. 2018 - Jun. 2018

- Helped students understand complex Data Structures and Algorithms.
- Cleared their doubts for DS implementations in C

Projects

Intelligent Fabric Detection and Classification

IIT Mandi

UNDERGRADUATE RESEARCH

Dec. 2017 - Feb. 2018

- Implemented a Deep Learning Model to identify the fabric and classify it into different classes.
- Implemented it using an Encoder with a CNN classifier, Siamese network for matching. The classification accuracy was 97 % on the test data
- Can be implemented in major online fabric stores to facilitate the process of picking a fabric without looking at it.
- Made Open Source: <https://github.com/shreyasbapat/Fabric-Detection> .

Poliastro

India

OPEN SOURCE SOFTWARE DEVELOPER

Nov. 2017 - PRESENT

- Developed a new plotting class for the plotting module based on plotly. Improved the CI Integrations and developed various methods of plotting trajectories in plotting module.
- Had almost 40% contributions in the latest major release of poliastro (0.9.0)
- Release Notes v0.9.0: <http://docs.poliastro.space/en/v0.9.0/changelog.html#poliastro-0-9-0-2018-04-25>
- Project Link: <https://github.com/poliastro/poliastro>

Ayushman Bhava

LEAD DEVELOPER

Design Practicum, IIT Mandi

4th Semester - IC201P

- Created a super smart medical vending machine with video conferencing with doctor, Payment gateway enabled for online payment.
- Used a Convolutional Neural Network for detecting the cash.
- Used Flask, Tensorflow-Keras, AJAX, HTML, CSS and JS
- Project Link: <https://github.com/shreyasbapat/AyushmanBhavaGUI>

Exoplanet Detection

IIT Mandi

DEVELOPER

Oct. 2017 - Jan. 2018

- Created a Machine Learning based prediction model which predicted the presence of Exoplanets on a star by the brightness data of that star over a long period of time.
- Used DFT and Dynamic Time Warping to make the data more readable.
- Project Link: <https://github.com/STAC-IITMandi/Exoplanet-Detection>

Orbital Simulator

IIT Mandi

DEVELOPER

Oct. 2017 - Jan. 2018

- Developed a simulator which computed the minimum distance of 500 different asteroids with the planet Mars for the next 5 years.
- This was used to predict the collision of asteroids with Mars.
- Used pyephem, astropy, openpyxl for the problem.
- Project Link: <https://github.com/shreyasbapat/Orbital-Simulator>

Positions of Responsibilities

STAC (Space Technology and Astronomy Cell)

IIT Mandi

CO-ORDINATOR

Jun. 2017 - Jul. 2018

- Organised Various sessions on Astronomy and Astrophysics in IIT Mandi.
- Organised an ICTS Einstein Lecture at IIT Mandi.
- Held several positional astronomy hackathons.

Honors & Awards

2018	5th Place , Orbital Simulator - Inter IIT Tech Meet 2018	IIT Madras, India
2017	1st Place , Exploring the Interstellar - Technex IIT-BHU 2017	Varanasi, India
2017	4th Place , Eyes on the Sky - Inter IIT Tech Meet 2017	IIT Kanpur, India
2013	2nd Place , State Level Aryabhat Astronomy Quiz 2013	Bhopal, India
2012	5th Place , State Level Aryabhat Astronomy Quiz 2012	Bhopal, India

Presentation

Astronomy Code Camp - Nehru Planetarium, Delhi

New Delhi, India

MENTOR AND PRESENTER

Jun. 2018

- Introduction to various scientific computing packages such as poliastro, astropy, pyephem to the participants.

6th International Conference on Engineering Technology, Science and Management Innovation (ICETSMI-2017)

IETE, Delhi, India

PRESENTER

Jun. 2017

- Presented the paper titled, "ProjectHiko1.0 - The Voice and Internet Enabled Smart Home"

References

1. **Prof. Aditya Nigam**, Asst. Professor, SCEE, IIT Mandi India
2. **Prof. Arnav Bhavsar**, Asst. Professor, SCEE, IIT Mandi India