Shreyas Bapat

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Education

- **Indian Institute of Technology Mandi** — Mandi, India
  Bachelor of Technology in Electrical Engineering; CGPA: 7.51/10.0 — *Aug. 2016 – Present*

Publications

- **Projecthiko 1.O - The Voice and Internet Enabled Smart Home** — IJETSR- ISSN 2394 3386
  Author — *Volume 4, Issue 6 — June 2017*
  - **Cost Enhancements**: Deviced a very cheap and efficient way of making a home smart.
  - **Flask, Google Speech**: Used Flask and HTML,CSS to create a web interface for handling the resources in home. Flask is a python based framework that can provide a stable backend to websites. Also implemeted the Google Speech API to access the voice inputs of the user.

Experience

- **Poliastro - OpenAstronomy** — Barcelona, Spain
  Software Development Intern — *May 2018 - Present*
  - **Orbit Plotting Module**: Restructured the whole plotting module and created two different backends for plotting. One using plotly and the other using mat- plotlib. 2D Interactive orbit plotting introduced
- **Indian Institute of Technology Mandi** — Mandi, India
  Teaching Assistant — *Feb. 2018 - Jun. 2018*
  - **Programming and Data Structures Practicum**: Helped students understand complex Data Structures and Algorithms. Cleared their doubts for DS implementations in C

Projects

- **VLBI Image Reconstruction using Deep Learning**: U-V Data is to be reconstructed for the purpose of Event Horizon Telescope. The data is from very less number of radio telescopes.
- **poliastro**: Open source python library for astrodynamics.
- **Intelligent Fabric Detection and Classification**: A Deep Learning Model to identify the fabric and classify it into different classes. Data Based Training.
- **Ayushman Bhava**: A smart medical vending machine with video conferencing with doctor, Payment gateway enabled for online payment. Deep Learning for Cash detection.
- **astrool**: A python library for positional astronomy calculations and map generation.
- **Exoplanet Detection**: A Machine Learning based prediction model which predicts the presense of Exoplanets on a star by the brightness data of that star over a long period of time.

Programming Skills

- **Languages**: 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 and Libraries**: git, mercurial, PyCharm, plotly, mayavi, Tensorflow, Keras, numba JIT

Presentations and Talks

- **Astronomy Code Camp - Nehru Planetarium, Delhi** — New Delhi, India
  Mentor and Presenter — *Jun. 2018*
  - **Scientific Computing**: Introduction to various scientific computing packages such as poliastro, astropy, pyephem to the participants.
- **6th ICETSMI-2017** — IETE, Delhi, India
  Presenter in 6th International Conference on Eng. Tech., Science and Mngmt. Innovation — *Jun. 2017*
  - **Paper Presentation**: Presented the paper titled, ProjectHiko1.O - The Voice and Internet Enabled Smart Home at the conference.