

Himanshu Shekhar

Pre-final year | Backend and Linux guy

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Education

2015–2020 **5 Year Dual Degree B. Tech. IT and M. Tech. Robotics.**
Indian Institute of Information Technology, Allahabad
CGPA: 8.79 (7 semesters)

Experience

December **Backend Intern**, SocialCops.

- 2018 - Dockerized all (18) microservices of Collect - a mobile data-collection app, easing local setup and on-prem deployments on single click via docker-compose.
- Optimized older Dockerfiles for dependencies, bringing down build size and build time by 80%.

May–July **Backend Intern**, SocialCops.

- 2017 - Built Collect Toolbox - a Python SDK to abstract complex queries and ease day to day related chores.
- Built a performance reporting tool for the support team which sends an Excel report weekly on Slack.

Apr 2017–Apr **Software Development Coordinator**, Technical Society, IIIT-Allahabad.

- 2018 - Organized workshops, talks and mentored students to get started with software development.
- Taught primarily about Linux, Git, REST API, authentication, etc.
- Developed alumni portal for the institute to house profiles, contact information and organize events. The portal was used for first alumni meet in 2017.

Projects

Jan - May **Intent based Robot Grasping**, Python, Matplotlib, PyTorch, OpenCV.

- 2018 - Paper presented at IEEE IACC 2018.
- Preparatory work to recognize optimal rectangle for object grasping by a robotic arm.
- Created data-pipeline for optimising memory usage by **lazy-loading training data**.
- Created tool to label rectangles on training images using OpenCV based GUI.

March 2018 **Speaking Geo-GP Assistant**, NodeJS, MongoDB, Geospatial queries and viz.

- Runner up at Smart India Hackathon 2018, ISRO. Ongoing project with ISRO IIRS.
- Built a voice assistant to help policy makers take data-driven decision based on geographical data.
- Implemented geospatial queries and a ReST API using NodeJS and MongoDB.

March 2018 **Aerially**, NodeJS, Ethereum.

- Runner up at Hack In The North 3.0, IIIT-Allahabad.
- Built a smart-contract platform for airlines to transfer overbooked passengers to alternate flights.
- Used Ethereum's eventing mechanism to monitor events.

Dec 2015 - **ProxyMan**, Bash.

- Present - Lets you configure system-wide proxy settings on Linux.
- Configures GNOME gsettings, bash, apt, dnf, git, npm, docker, Dropbox proxy settings.
- Appreciated by community with more than 300+ stars on GitHub and used widely at IIITA.

Jan 2018 **Dexter**, Python, JavaScript, NLP.

- Winner at Hack36, annual hackathon of MNNIT-Allahabad.
- Voice controlled code-editor for the disabled.
- Uses Fuzzy logic based NLP parser to convert voice to Python/Javascript code using Chrome Speech Recognition API.

- Oct 2017 **Expedite**, Python, Django, MySQL, ReST API.
- Winner at IIIT-Hacks, 2017, IIIT-A's annual internal hackathon.
 - Bridging customer issues on social media to customer support.
 - Comments/Reviews on social page gets registered on company's CRM.
 - Neural Network based classifier classifies and assigns issues to respective support team.

May 2016 - **21Lane**, Python, Qt5, FTP.

- Oct 2016
- Peer to peer, GUI based file sharing software written in Python, Qt5 and pyftplib.
 - Uses FTP to transfer file and data between machines.
 - Implemented bulk file downloader by batching them using worker threads and a task-queue.
 - Mimics bittorrent with a central hub acting as tracker.

Computer skills

Data pipelines, ReSTful services, Benchmarking, Debugging, Testing

Confident Python, Golang, JavaScript, C, Bash

Intermediate C++, Java, Matlab/Octave

Tools Docker, SQL, MongoDB, Qt5, Django, Flask, Git

Platform Linux

Positions of responsibility

Mar 2018 - **Student Gymkhana, IIIT-Allahabad.**

Feb 2019 Senator to the student welfare body

July 2017 - **Nybles, Technical Newsletter of IIIT-A.**

Dec 2017 Web operations, Founding member

April 2016 - **Technical Society, IIIT-Allahabad.**

March 2017 Member, FOSS Society

Relevant courses taken

Data Structures and Algorithms

Artificial Intelligence

Image Processing

Compiler Design

Computer Networks

Object-Oriented Programming

Linear Algebra

Design and Analysis of Algorithms

Operating Systems

Data Mining

Computer Architecture

Database Management Systems

Optimization Techniques

Convex Optimization