

# Himanshu Shekhar

Final year student | Backend engineer

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## Education

2015–2020 **Bachelors & Masters of Technology in Information Technology.**  
Indian Institute of Information Technology, Allahabad  
CGPA: 8.89 (8 semesters)

## Experience

- May 2019 - **Software Engineering Intern**, Sumo Logic.  
Present
  - Worked with ingestion team to annotate logs with AWS EC2 instance information and tags
  - The additional field helped the users to perform more powerful queries based on instance metadata
  - Learned about architecture of cloud-based distributed systems with ingestion rate of over 200 TB/day
- March 2019 - **Co-Investigator**, Indian Space Research Organization (ISRO).  
Present
  - Developed a Voice Based Assistant to allow policymakers drive decisions based on geospatial data
  - Implemented a Django API over PostGIS, along with integrating an NLP parser for voice queries
- December 2018 **Backend Intern**, SocialCops.
  - Dockerized all (18) microservices of Collect - a mobile data-collection app
  - It eased local setup and on-premise deployments in single-step via docker-compose
  - Optimized older Dockerfiles for dependencies, bringing down build size and build time by 80%
- May–July 2017 **Backend Intern**, SocialCops.
  - 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 2018 **Software Development Coordinator**, Technical Society, IIIT-Allahabad.
  - 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 2018 **Intent based Robot Grasping**, Python, Matplotlib, PyTorch, OpenCV.
  - Paper published at IEEE International Advance Computing Conference 2018.
  - Preparatory work to recognize optimal rectangle for object grasping by a robotic arm
  - Created data-pipeline to optimize memory usage in PyTorch by lazy-loading training data
  - Created tool to label rectangles on training images using OpenCV based GUI
- 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
  - Developed a tool to 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
- Used 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 intra-university hackathon
- Bridging customer issues on social media to customer support
- Comments/Reviews on social page gets registered on company's CRM
- Machine learning 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
- Used 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

## Technical skills

Data pipelines, ReSTful services, Benchmarking, Debugging

Confident Python, Golang, Java, Scala, JavaScript, C, Bash

Intermediate C++, Matlab/Octave

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

Platform Linux, AWS

## Positions of responsibility

Mar 2018 - **Senator to the Student Welfare Council, IIIT-Allahabad.**

Feb 2019 Bridged students to welfare council to get their grievances addressed

April 2016 - **Member in Open Source Society, IIIT-Allahabad.**

March 2017 Organized workshops and mentored students to get started with open-source

## Relevant courses taken

Distributed Systems	Data Structures and Algorithms
Artificial Intelligence	Operating Systems
Artificial Life Simulation	Soft Computing
Image Processing	Data Mining
Compiler Design	Computer Architecture
Computer Networks	Database Management Systems
Object-Oriented Programming	Optimization Techniques
Linear Algebra	Convex Optimization