Himanshu Shekhar

Pre-final year | I build stuff with code

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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 2018 **Backend Intern**, SocialCops.
- 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 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 presented at IEEE IACC 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 tools 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 - Present **ProxyMan**, Bash.
- 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 - Oct 2016	**21Lane**, Python, Qt5, FTP.
	- Peer to peer, GUI based file sharing software written in Python, Qt5 and pyftpdlib.
	- 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	ROS, Docker, SQL, MongoDB, Qt5, Django, Flask, Git
Platform	Linux

Positions of responsibility

Mar 2018 - Feb 2019	**Student Gymkhana, IIIT-Allahabad**.
	Senator to the student welfare body
July 2017 - Dec 2017	**Nybles, Technical Newsletter of IIIT-A**.
	Web operations, Founding member
April 2016 - March 2017	**Technical Society, IIIT-Allahabad**.
	Member, FOSS Society

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