

# Sumit Ghosh @SkullTech

Developer, Automation Consultant. IIT Delhi

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## Experience

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### Department of Computer Science, IIT Delhi

*SysAdmin (System Administrator) • Nov, 2017 — Present*

Responsible for the upkeep, configuration, and reliable operation of computer systems and servers of IIT Delhi's Computer Science Department.

### independent Consulting

*Software Development and QA Automation Consultant • Oct, 2017 — Present*

Offering software development consultation and automated software-testing cum quality-assurance solutions as an independent contractor.

### DevIt Consultancy

*Co-founder and Lead Developer • Feb, 2018 — Present*

DevIt Consultancy is a startup software consultancy firm founded by students of IIT Delhi.

### Upwork

*Freelance Consultant and Programmer • Jan, 2016 — Present*

- Worked on 30+ small to largely sized contracts
- Out of 23 feedbacks, 17 are 5-star. Average feedback - 4.74
- Job satisfaction score - 86%

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## Education

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### Indian Institute of Technology (IIT) Delhi

*B.Tech and M.Tech, Computer Science and Engineering • 2016 — 2021*

- Was among the top 0.075 percentile in the entrance exam (JEE)

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## Projects

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### Super1337-CTF

*Django, Hacking • June — October, 2017*

A site for hosting CTF contests. Comes with a complete scoring and leaderboards system.

### PearSend

*Python, Sockets • December, 2017*

A simple CLI client for peer-to-peer file or message sending. It supports protection against transmission error using CRC32 checksum, and comes with CLI (command-line argument) and interactive mode both.

### Goodgives

*Python, Scraping • January, 2018*

A CLI tool + web-app for auto entering giveaways in Goodreads. I had always been a fan of books, and who wouldn't love some free books!

### Open-source Contributions

*Open-source, Github • Always*

A site for hosting CTF contests. Comes with a complete scoring and leaderboards system.

- **MusicBrainz Picard Website** — MusicBrainz Picard is a free and open-source software application for identifying, tagging, and organising digital audio recordings

- **Mozilla's Webcompat Issue Parser** — This is a tool for downloading and parsing Mozilla's webcompat issues.
- **Autowebcompat** — This project aims to automatically detect web compatibility issues using Selenium and Neural Networks.
- **ProxyMan** — This is a handy tool to configure proxy setting on Linux easily.

## Compiler and Programming Language Design

*Prof. Sanjiva Prasad • Compiler, Programming Languages, OCaml • January — April, 2018*

Designing a programming language, complete with its compiler (written in OCaml). Various aspects of programming Languages theory were explored through this project.

## deCAD

*Prof. Subhashis Banerjee • C++, QT • January — April, 2018*

deCAD is a software package for basic computer-aided engineering drawing. Complete with a GUI interface, it provides easy conversion from 2D projections to 3D model and vice-versa.

## Designing an ARM Processor

*Prof. Anshul Kumar • CPU, Processor Design, VHDL • January — April, 2018*

Designing a complete ARM CPU using VHDL. Best practices of processor design are being implemented in this project, such as dividing the CPU into datapath and controller, pipelining, etc.

## Journalist

*Python, Github API • January, 2017*

App to write journal digitally. It lets you write your journal using Markdown in your favorite text-editor, stores written journals in a comprehensive directory structure and lets you view the journals (Markdown rendered in HTML) in browser.

## Data Structures and Algorithms Projects

*Prof. Mausam & Prof. Sedgewick • Java • July — November, 2017*

- **8-Puzzle Solver** — Finds the most cost-effective way to solve a given 8-puzzle. Implemented using Dijkstra's and A-star algorithms.
- **Image Compression System** — Encode a given monochrome image in a compact format and perform operations like Inversion and Morphing on that.
- **Percolation Simulator** — Implemented using Union-Find data structure, it simulates percolation behavior of fluids.

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## Skills

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### *Programming Languages*

Programming proficiently in the following, Python, Java, C, C++, Ocaml, VHDL, ARM Assembly.

### *Automation and Scripting*

Using QA frameworks like **Selenium**

### *Web Scraping*

Scraping data from the web using libraries like requests and lxml or powerful frameworks like Scrapy

### *Web Development*

Back-end Web Development using **Django** and **Flask**. Basic front-end designing using Bootstrap and Javascript.

### *System Administration and DevOps*

Using containerization (Docker) and process management systems (Supervisord). Configuring and managing web-servers (Apache2 and Nginx), implementing reverse proxy and load balancers in such.

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## Associations

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### Dev Club IIT Delhi

*Member • 2017 — Present*

Working on interesting web or software development projects with other like-minded student developers of IIT Delhi.

## Entrepreneurship Development Cell

*Technical Executive • 2017 — Present*

The Entrepreneurship Development Cell (eDC), IIT Delhi is a cell which aims to support and augment the efforts of budding entrepreneurs in the college level to get established as a successful and independent entrepreneurs.

## National Service Scheme (NSS) IIT Delhi

*Volunteer • 2016 — Present*

Indulge in nation building activities through various events and projects which are aimed towards the benefit of people in and around IIT Delhi.

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## Outside Interests

- Watching and appreciating movies.
- Listening to good music.
- Dabbling in Philosophy.
- Financial investment.
- Travelling to exotic places.

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## Additional Links

- [My personal website double-serving as a blog. Mostly technical.](#)
- [My Github profile.](#)

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## Social Links

- **Github:** <https://github.com/SkullTech>
- **Twitter:** <http://twitter.com/SkullTech101>
- **LinkedIn:** <https://www.linkedin.com/in/sumit-ghosh-skulltech/>
- **Website:** <https://sumit-ghosh.com>