Sumit Ghosh @SkullTech

Developer, Automation Consultant. IIT Delhi

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Experience

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%

Education

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)

Projects

Super1337-CTF

Djnago, 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

My contributions to popular open-source projects.

- **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 Djikstra'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.

Skills

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.

Associations

Dev Club IIT Delhi

Member • 2017 — Present

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

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.

Outside Interests

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

Additional Links

- My personal website double-serving as a blog. Mostly technical.
- My Github profile.

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