Sourabh

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About

I am highly motivated Physics postgraduate with a passion for programming and a strong foundation in various languages. 3+ years of experience in Python, adept at core syntax, data structures, algorithms, object-oriented programming (OOP), and libraries. And I learn the programming languages to solve the problem related to Physics and make simulations. Along with that I learn make software to solve the daily life problems and I also learn about other languages like C, C++ and FORTRAN.

Skills

- **Programming Languages**: ***Python, C++, FORTRAN, JavaScript (Basic)***.
- **Technologies and Tools**: HTML, CSS, Microcontroller, LATEX, Sensors, TinkerCad, Origin.
- **Operating System**: Ubuntu (as daily driver), Windows, MacOS.
- **Python Libraries**: Flask, Django, NumPy, Scipy, Pandas, etc.
- **Version Control**: Git.
- Good understanding of **computer hardware** and **networking hardware**.
- Good understanding of **Physics and Mathematics**. And working knowledge of Electronics and Chemistry.
- Office Suits (MS Office & LibreOffice), Data Interpretation and analytics etc.

Education

- **Guru Jambheshwar University of Science & Technology**, Hisar
  Mater of Science, *Physics* **(2022-24)**
- **Chaudhary Ranbir Singh University**, Jind
  Bachelor's of Science, *Physics Chemistry & Mathematics* **(2019-22)**

Projects

- **WebRoot**: It's a easily, lightweight and fast deployable (less than 1 minute) that expose the selected folder to internet and user can access the folder using its login credentials direct from the browser. I use **Flask for the backend** that generate can generate **both multiple static HTML page without JS** and **single page application with JS**.

- **X-analyser**: It is very light and well optimized python software that can use **analyze the XRD data of crystals** and find it's all parameters with high efficiency.It uses the **pandas, scipy and NumPy**. And I use it in my final practical in Masters.

- **Backup_helper**: It is software written in python for **backup the content of the selected folder** with its own version control to cloud storage (like Google Drive). It uses the **rclone API** for this, and it **syncs the folder in very efficient way**. And it's helpful for small businesses.

- **Music-downloader**: It's a very light command line tool written in python to download music direct form the YouTube link.

- **Simulation for solving HMI wave function**: It's a **simulation written in FORTRAN** that solve the HMI wave function and **python program is used for its data interpretation and analysis to make 3D graphs**. It uses RK method for solving equation. The FORTRAN program is very optimized and fast.

- A library of many **Computational Physics program** written in FORTRAN to solve the problem in Physics and Mathematics.

- **David-Assistant**: It is a **virtual assistant written in Python** for specially able people, and it's **connect to a microcontroller device** that made by me. And I able to display at State Level Science Exhibit in my graduation . And it wins at multiple level in Exhibit. It's my first project.

- Multiple IoT devices program used in C++ for different projects.

  Note: I still work on some project to make new version for more optimization and increase the performance.

Achievements

- Best Explainer in **State Level Science Exhibit**.
- Intra-University **Graduation Mathematics Quiz winner**.
- Multiple times Science Quiz winner at **Inter-College Level and in University.**
- Multiple times selected for the **State Level Science Exhibit at Graduation level.**
- **IIT JAM (2022**) qualified.

Future Projects

- Using Rust make an open source DBMS that is faster, more stable and easy to use.
- Make an open source application for alternative of paid software for Linux.
- Making a web framework use multiple language, that unitizes the different benefits of different programming language.
- Making an open source software collection for scientific work.