Name: **Saurav Shahi**

Discord Username: **hero_hunter8799 #0**

Email Address: sauravshahi16@gmail.com

Nationality: Indian

Primary Spoken Language: Hindi and English

1. Top project choice: DRAKVUF Rust & Python bindings
2. Desired project size: 175 hours (Medium)
3. Are you willing and able to work on other projects instead? Yes
4. Preferred coding languages and experience: I have intermediate-level proficiency in **Python and C/C++**. I am also familiar with Rust and willing to learn it further during the project.
5. Previous Windows, Unix, or Mac OS X development experience: I have experience developing software on Unix-based systems, particularly Linux, as well as some experience with Windows development.
6. Previous usage with Honeynet Project tools or honeypots in general: While I haven't had direct experience with Honeynet Project tools, I have a strong interest in cybersecurity and have been exploring related tools and technologies independently.
7. Previous Honeynet Project or honeypot related development experience: I have not previously contributed to the Honeynet Project or developed specific honeypot-related software. However, I have contributed to open-source projects and am comfortable with the collaborative development process.
8. Previous open-source development experience: I have contributed to several open-source projects, including **Hacktober Fest 2022** and **Hactober Fest 2023** (completed with 5 accepted contributions 4 in Python and 1 in Rust language).

9. School attended and specialty/major: I attend Indian Institute of Information Technology (IIIT) Una specializing in Information Technology, IT.
10. Years attended: 4
11. City/country for the summer: India
12. Expected time for the project: I expect to dedicate approximately 20-25 hours per week to this project.
13. Jobs, summer classes, vacations, and other commitments: [List any commitments you'll need to work around]
14. Previous Summer of Code projects: I have not participated in any previous Summer of Code projects.
15. Other Google Summer of Code projects applied for:
    - Development of an Open-Source EEG Foundation Model at Department of Biomedical Informatics, Emory University
16. Resume/CV URL: Resume Link
17. Proposed project description:

I propose to work on the DRAKVUF Rust & Python bindings project, focusing on creating automatic Rust & Python binding generators for the core DRAKVUF libraries. The project aims to automate the binding generation process, ensuring that future changes to the core library APIs are automatically adjusted in the respective language bindings. Deliverables include:

- ➔ Development of automatic binding generators for Rust & Python.
- ➔ Creation of test cases and integration into the Continuous Integration (CI) pipeline to ensure the operational status of the bindings.
- ➔ Documentation detailing the usage and implementation of the bindings.
- ➔ Regular communication with the mentor and the community, providing updates on progress and addressing any issues or challenges encountered.

18. Expected timeline with milestones:

Weeks 1-2: Familiarization with DRAKVUF codebase and existing bindings.

Weeks 3-4: Research and design of automatic binding generators.

Weeks 5-8: Implementation of binding generators for Rust & Python.

Weeks 9-10: Integration of test cases into the CI pipeline.

Weeks 11-12: Documentation writing and finalizing the project.

19. Why am I well suited for this project and why am I interested in it?

I have a strong background in software development, with experience in Python, C++, and open-source contribution. My familiarity with these languages, combined with my willingness to learn Rust, makes me well-suited for this project. Additionally, I have a keen interest in cybersecurity and malware analysis, making the DRAKVUF project particularly appealing to me. I am excited about the opportunity to contribute to improving an existing tool and automating the binding generation process, which will enhance the accessibility and usability of DRAKVUF for the cybersecurity community.

20. Face-to-face meetings with Honeynet Project members: I have not met any Honeynet Project members face-to-face at recent public events.