**Skills Learned**

Throughout my seven weeks here at SHINE, I have learned many concepts including the basics of:

- **Boolean Logic**
- **Digital Circuits**
- **Principles of**
- **Circuit/Logic Obfuscation**

Coding was key to my research as I was responsible for creating a simulation function for circuits. Therefore, Python was the programming language that I learned to be able to create the simulation function.

**Communication skills** was another skill learned as it was key to my research as I was able to express my concerns and share ideas with the team.

**Impact of Professor’s Research**

Hardware security is as important as software and network security. Many people nowadays are concerned about their privacy and security. Circuits are stored with lots of confidential information that attackers are trying to reveal. Also, attackers can steal the design of a non-obfuscated circuit and can illegally reproduce and sell it for profit, which is what is trying to be prevented by hardware obfuscation.

In Professor Pierluigi Nuzzo’s lab, we are trying to model and optimize multiple hardware obfuscation techniques for hardware Security. A tool for finding the best obfuscation solution to any IC is their ultimate goal in this research.

**Impact of Future SHINE Students**

To all future SHINE students:

- Do not be afraid of the material that will be given to you in your labs, there is a range of profound vocabulary that may seem frightening at first, but with constant effort in it, you will get the hang of it and it will become understandable.
- Do not be discouraged if you do not know the material or the subject at all, talk with your mentors as they are there to fully guide you and they will not let you down.
- Do a thorough background survey of your research as it will give you a better understanding of what you will be working with.
- Make connections and ask questions with the SHINE team, they will be there for you and will also help you to strengthen your academics.
- Make the seven weeks at SHINE last!!! Get to know your fellow SHINE peers, go out and have fun, it will definitely brighten up your experience.

**References**


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