

Summer Internship 2022 IC/UNICAMP

Security R&D Team

- **Objetivos do estágio**

The candidate will have the opportunity to work in the area of cybersecurity with a qualified team engaged in the search for innovative solutions. More specifically, the candidate will be involved in the development and improvement of solutions related to biometrics, user authentication, digital privacy, and liveness detection, among others.

- **Áreas de interesse**

The candidate will have the opportunity to work with:

- Biometrics
- Digital Privacy
- Authentication Methods and Procedures
- Liveness Detection

- **Resumo das vagas:** total 2 vagas

| Position | Area | Grad level | # positions |
|----------|-----------------------|----------------|-------------|
| 1 | Security - Biometrics | Undergraduate | 1 |
| 2 | Security - Biometrics | Master Student | 1 |

- **Proposta de remuneração**

R\$ 2300,00 à R\$3000,00

- **Vantagens adicionais**

Vale Refeição, Plano de Saúde, Plano odontológico, Transporte, Estacionamento, Portal de vendas produtos Samsung.

Project 1

Total number of positions: 2

Positions 1 and 2

Proposal: Undergraduate developer intern (1) and Master student developer intern (1).

Objectives: The candidate will have the opportunity to work in the area of cybersecurity with a qualified team engaged in the search for innovative solutions. More specifically, the candidate will be involved in the development and improvement of solutions related to biometrics, user authentication, digital privacy, and liveness detection, among others.

Areas of interests: The candidate will have the opportunity to work with:

- Biometrics
- Digital Privacy
- Authentication Methods and Procedures
- Liveness Detection

Grad level:

Position 1: Undergraduate

Position 2: Master student

Schedule:

Week 1:

- Presenting the company, the team, and the project
- Presenting the problems and goals related to the project
- Creating and preparing the work environment

Week 2:

- Introducing the main concepts related to the project
- Introducing the tools and frameworks employed by the team
- Literature review

- Reading project documentation

Week 3:

- Defining the problem and goals
- Planning a set of tasks to be executed in the project

Weeks 4

- Work in the following topics:
 - Authentication Methods
 - Biometric Systems
 - Anti-spoofing Techniques
 - Liveness Detection

Weeks 5

- Work in the following topics:
 - Continuous Biometric Authentication
 - Multi-modal and Multi-factor Authentication

Weeks 6:

- Implement face detection and face identification algorithms
- Develop a solution related to face biometric authentication

Weeks 7, 8 & 9:

- Improve the previously developed solution to incorporate liveness detection
- Integrate the solution with the operating system environment
- Test the proposed solution in the most varied scenarios

Weeks 10, 11 & 12:

- Writing a technical report and/or a scientific paper
- Writing documentation
- Presenting the final results to the team

