Alaf do Nascimento Santos

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PERSONAL STATEMENT

Master student in electrical engineering with a background in telecommunications and automation, mainly in the area of the Internet of Things, currently seeking an end-of-study internship in embedded systems.

EDUCATION

2022 – 2024 - Master of Science in Engineering (Diplôme d'ingénieur).
Télécom Paris, Institut Polytechnique de Paris, Palaiseau, France. *Double degree program.*
- M1: Embedded systems, mobile networks, and internet of things.
- M2: Embedded systems and information processing.

2017 – 2024 - Bachelor of Science in Electrical Engineering.
Federal University of Espírito Santo, Vitória, Brazil. *Double degree program.*
- Control and automation systems, telecommunications, and computer science.
- Final Project: Multiplatform System For Data Reception Via Visible Light Communication Technology.

PROFESSIONAL EXPERIENCE

2023 - Network and Automation Intern.
Synchrotron SOLEIL, Saint-Aubin, France.
- Software tool parameterisation dedicated to centralised supervision of industrial PLCs.
    - Real-time monitoring tool: Zabbix;
    - Programming languages: Python, and C++.

2021 – 2022 - Embedded Systems and IoT Intern.
2Solve Engenharia e Tecnologia, Vitória, Brazil.
- Development of software for embedded systems, IoT Web Applications, and technical documentation.
    - Embedded systems based on Raspberry Pi and SAMD21;
    - Programming languages: Javascript, Python and C++;
    - Web dev tools: AngularJS, InfluxDB, and MongoDB;
    - IoT tools: Node-RED and Grafana.

2019 – 2021 - Scientific and Technological Undergraduate Researcher.
UFES Telecommunications Laboratory, Vitória, Brazil.
- Software and hardware design for visible light communication systems.
    - Dev tools: Android Studio;
    - Programming languages: MatLab, Java, Python, and C++.

2019 – 2020 - Automation Intern.
Cassiano Antonio Moraes University Hospital, Vitória, Brazil.
- Establishment of electronics for a maintenance supervisory system and a data monitoring application, and technical documentation.
    - Embedded systems based on Raspberry Pi, Arduino, and ESP8266;
    - Real-time monitoring tool: Zabbix;
    - Programming languages: Python, Javascript, and C++.

2019 - Scholar in educational programme.
Tutorial Teaching Program, Vitória, Brazil.
- Software training, such as LaTex. Research about embedded systems. Production of scientific articles.
    - Embedded systems based on Raspberry Pi and Arduino;
    - Programming languages: MatLab, Python and C++.

VOLUNTEERING

2018 – 2019 - Activity Manager.
Academic Center of UFES Electrical Engineering, Vitória, Brazil.
- Organization of welcome events for freshmen, organization of lectures on subjects of interest to graduation, promotion of sports events, electrical engineering custom t-shirts selling, maintenance of the study room.

2018 - Museum Mediator.
UFES Museum of Life Sciences, Vitória, Brazil.
- Introduce the museum to visitors, control the flow of people, and pass safety guidelines.

DIGITAL SKILLS

Microcontrollers (Arduino, BeagleBone, ESP8266) | Raspberry Pi | SystemVerilog and VHDL | C/C++ | Python | Rust | OCaml | MATLAB | Java | Javascript | Node.js Vue and Angular MongoDB | InfluxDB | Git | Linux | LaTeX

LANGUAGE SKILLS

- Portuguese - Native Language.
- English - Telecom Paris C1, 2023. Cambridge Linguaskill B2 (178 out of 180), 2022.
- French - Telecom Paris C1, 2023. Test de Connaissance du Français B2 (488 out of 699), 2021.
- Spanish - Beginner.

HONOURS AND AWARDS

2022 – 2024 - BRAFITEC scholarship.
CAPES Foundation, Brazil.
- Master's degree funding granted based on criteria of academic and technical excellence.

2016 - Honorable Mention Brazilian Public School Mathematics Olympiad.
Institute of Pure and Applied Mathematics (IMPA), Rio de Janeiro, Brazil.
- Stood out in mathematics at this Olympiad, being the only high school student out of around 500 in the school to receive this award.

2016 - 1st place at the São João Batista School Science Fair.
EEEFM São João Batista, Cariacica, Brazil.
- Developed a Tesla coil capable of creating electric arcs of a few centimeters.

2015 - 2nd place at the São João Batista School Science Fair.
EEEFM São João Batista, Cariacica, Brazil.
- Developed a physics project involving basic concepts of electromagnetism to turn on fluorescent lamps wirelessly at close range.

PUBLICATIONS AND APPEARANCES

- **Performance Evaluation of an OOK-Based Visible Light Communication System for Transmission of Patient Monitoring Data.**
  Conference: IFMBE Proceedings. 2021.

- **Application of Visible Light Communication Technology for Monitoring in Hospitals.**
  Conference: Brazilian Congress on Biomedical Engineering. 2020.

- **History of PET Electrical Engineering UFES.**
  Conference: Brazilian Congress of Engineering Education. 2020.

- **Low Cost Module for Supervisory System of Hospital Substations.**
  Conference: Congresso Internacional Online das Engenharias. 2020.

FOR MORE INFORMATION

- Linkedin: https://www.linkedin.com/in/alafsantos
- Github: https://github.com/alafSantos
- Lattes: http://lattes.cnpq.br/4461462146153067
- ORCID: https://orcid.org/0000-0002-5469-3872