ALEXSANDER C.A.A. COSTA

Control and Automation Engineer

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EXPERIENCE

NSERC UTILI CREATE Program
Advised by Professor Jeremy Laliberté

📅 Sep 2020 – Present ⚲ Ottawa, Canada

- NSERC-funded CREATE Uninhabited aircraft systems Training, Innovation and Leadership Initiative (UTILI) for the training of engineers and scientists in the safe and effective operation of Remotely Piloted Aircraft Systems (RPAS).

Data Scientist at IHM-Stefanini

📅 Jun 2020 – Present ⚲ Belo Horizonte, Brazil

- Data driven approach in problem solving for various industrial environments — development of Deep Learning models; exploratory statistical analyses; employment of data visualization tools; development of automatic system identification and control tools; presented workshops on various Machine Learning topics.

Member of the Computational Intelligence Laboratory (LITC - UFMG)
Advised by Professor Antônio de Pádua Braga

📅 Mar 2018 – Present ⚲ Belo Horizonte, Brazil

- Starting as an intern at a joint project with IHM-Stefanini, I have been actively participating in research projects with the LITC since 2018. A few of the most relevant projects were: Froth Flotation Output Prediction, Pipeline Leaking Detection, Industrial Alarm Systems Management and Optimization and Anomaly Detection for Condition Based Maintenance.

Participation in the UNIGOU Academic Internship in Prague
Advised by Professor Jan Holub

📅 Sep 2019 – Nov 2019 ⚲ Prague, Czech Republic

- *"Language Independent Babble Noise Generation"*. In this project a *wavenet* type of artificial neural network was developed with the goal of artificially generating babble noise for internal use in the Department of Measure at the Czech Technical University.

Extension Project with IEAT-UFMG
Advised by Professor Estevam Barbosa de Las Casas

📅 Mar 2016 – Feb 2018 ⚲ Belo Horizonte, Brazil

- Development of the Federal University of Minas Gerais automated Digital Signaling system. This project was developed in the Institute of Advanced Studies (IEAT) of UFMG. Skills in WEB development and shell scripting for automation were acquired. In addition to the technical experiences, I represented the project in various meetings held inside the university, in which abilities such as my public speaking were tested.

PUBLICATIONS

- *Online learning of neural networks using random projections and sliding window: A case study of a real industrial process*, Engineering Applications of Artificial Intelligence - Apr 2021
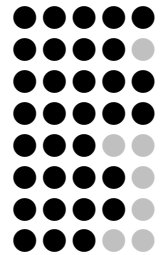
PROGRAMMING SKILLS

Python	●●●●●
MATLAB	●●●●○
R	●●●●●
keras	●●●●●
C	●●●○○
WEB Development	●●●●○
Bash Scripting	●●●●○
SQL	●●●○○

EDUCATION

Master of Applied Science: Mechanical Engineering
Carleton University

📅 Sep 2020 – Present

Bachelor's Degree in Control and Automation Engineering
Federal University of Minas Gerais

📅 Mar 2015 – Feb 2020

INTERESTS

Technical

- Deep Learning, ConvNets, LSTMs;
- Affective Computing;
- Computer Vision;
- Natural Language Processing (NLP);
- Data driven control.

Hobbies

- Playing my guitar.
- Reading literary classics.
- Watching cute animals videos.

LANGUAGES

English	●●●●●
Portuguese	●●●●●
Spanish	●●●●○