Vinicius Arruda

viniciusferracoarruda@gmail.com
viniciusarruda.github.io

EDUCATION

Federal University of Espírito Santo — Vitória, Brazil
Master of Science in Computer Science — *Mar 2019 – Sep 2021 (Expected)*
- Working with deep learning applied to computer vision for object recognition and detection.

Federal University of Espírito Santo — Vitória, Brazil
Bachelor in Computer Science; GPA 9.06/10.0 — *Mar 2014 – Dec 2018*
- Thesis: Improving cross-domain object detection using Unsupervised Image-to-Image Translation: Car detection in day to night images.

Federal Institute of Espírito Santo — Serra, Brazil
Informatics Technician — *Aug 2012 – Dec 2014*

University of Vila Velha — Vila Velha, Brazil
Bachelor in Civil Engineering — *2010 – 2013 (Interrupted)*

EXPERIENCE

SiDi — Campinas, Brazil
Software Developer (Text-to-Speech) — *Jul 2021 – present*

Start ID — Vitória, Brazil
Software Developer (Computer Vision) — *Nov 2020 – Jul 2021*
- Build and deployment of deep learning models in production.
- Working with computer vision models, managing multiple cameras concurrently via inter-process communication.
- Training and evaluation of object detection models for real-time inference.
- Testing tiny models with Jetson Nano.
- Integration of inference engines with back-end and front-end.
- Main technologies used: Python, PyTorch, TensorFlow, OpenCV, Pillow, gRPC, requests, JavaScript, TypeScript, Node.js, Angular, Docker.

Olho do Dono — Vitória, Brazil
Internship — *Mar 2018 – May 2018*
- Implementation and testing of image processing algorithms and convolutional neural networks applied to stereo images of cattle, in order to measure the cattle weight without the use of weight scale. During the internship it was used the programming languages Python and C++ with the libraries OpenCV and TensorFlow.

Federal University of Espírito Santo — Vitória, Brazil
Undergraduate Researcher — *May 2015 - Nov 2016*
- Investigation of artificial neural networks and metaheuristics applied to time series prediction with focus on the algorithms Extreme Learning Machine and Particle Swarm Optimization. This research resulted in a full papel publication at the XLVIII Brazilian Symposium of Operational Research and was funded by the FAPES research agency. The programming languages used during the research were MATLAB, C, C++, Python and MQL5.

PUBLICATIONS

Cross-Domain Car Detection Using Unsupervised Image-to-Image Translation: From Day to Night
International Joint Conference on Neural Networks (IJCNN) — *2019*

Particle Swarm Optimization for training artificial neural networks of type ELM: A case study for time series prediction
XLVIII Brazilian Symposium of Operational Research (SBPO) — *2016*

Courses

- **Coursera:**
  - Deep Learning Specialization *(credential Nº 52CPP4HD9PZN)*
  - Sequence Models *(credential Nº 3E26CTTM4XLW)*
  - Convolutional Neural Networks *(credential Nº 5HZT6ZZHG3KU)*
  - Structuring Machine Learning Projects *(credential Nº 5XXEVQPMQEXQ)*
  - Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization *(credential Nº YTBYWVDC6BX7)*
  - Neural Networks and Deep Learning *(credential Nº CQEVEYKBNSAG)*

Scholarships

- **2019**: Full scholarship from Brazil's research agency CNPq (R$ 18,000/year) for a two-years master's degree program at the Federal University of Espírito Santo.

- **2015**: The State of Espírito Santo Research Agency (FAPES) scholarship for undergraduate research (R$ 4,800/year).

Services

- **Social chair:**
  - **2021**: LatinX in AI Social at AAAI 2021. *(www.latinxinai.org/aaai-2021)*

- **Teaching assistant:**
  - **2020**: Software Development in C, UFES. *(Instructor: Vinicius Passos)*
  - **2020**: Software Development in Python, UFES. *(Instructor: Vinicius Passos)*

Programming Skills

- **Languages**: Python, C, JavaScript

- **Libraries**: PyTorch, TensorFlow, NumPy, Pillow, Sklearn, OpenCV

- **Technologies**: Linux, Git, LaTeX, Angular, Node.js, Docker, gRPC, Protobuf