

Wanderson Souza



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Machine Learning Engineer & Deep Learning Researcher

CONTACT INFORMATION

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Date of birth: 1984-04-17

Nationality: Brazilian

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OBJECTIVE

I am a machine learning engineer with a PhD in Mechanical Engineering and have been working with convolutional neural networks since 2015, having more than 10 years of experience with Python. I have participated in several projects involving, among other areas of expertise, regression and classification data, detection and tracking of objects. I have expertise on the full stack machine learning development using consolidated libraries as NumPy, pandas, matplotlib, scikit-image, SciPy, tensorflow, Keras, caffe and PyTorch. I am proactive, organized, and dedicated, take responsibility for my work and I'm a great team player.

I intend to work on the development of deep learning models in any area of activity, be it in the construction of analytical models, natural language processing, or computer vision; I am also interested in researching new methods and strategies to improve network performance.

EXPERIENCE

Campus I - Lot. Cidade Universitaria, João Pessoa, PB, 58051-900

March 2020 – Present

Research and Developer

UFPB - GPICEEMA (INSTRUMENTATION AND CONTROL GROUP IN ENERGY AND ENVIRONMENTAL STUDIES)

Currently, I work as a researcher in the solar energy laboratory, creating solutions to combat COVID-19. One of the main works carried out was the use of computer vision techniques for reading the flow meter and venturi effect of mechanical ventilators. Some of my projects can be found on my GitHub (github.com/wangsouza).

R. Duque de Caxias, s/n - Centro, Cabedelo - PB, 58100-263

August 2017 – August 2019

Research and Professor

IFPB (FEDERAL INSTITUTE OF PARAÍBA)

- I was a professor of computer science and scientific methodology, teaching classes on programming basics, advanced Excel, and operating systems for technical education classes.

- Coordinated a team of developers to build a geolocation application aimed at users with dietary restrictions (for example: lactose or gluten intolerances, vegan, or vegetarian). The results pointed them to restaurants, markets and specialized food stores in the region.

Praça Napoleão Laureano, 01 - Varadouro - João Pessoa CEP: 58010-540

June 2015 – September 2019

Research and Developer

METROREC / CBTU-JP

- Between 2015 and 2019, we developed the VisionBerry project, which aims to optimize computer vision and object detection techniques, in order to estimate the multidirectional flow of pedestrians in trains and subways, a project that falls under the Smart Cities concept.

- In October 2017, the results of the VisionBerry project earned me participation in the Empreenda Santander contest in the technological innovation category and I reached the semi-final.

EDUCATION

Campus I - Lot. Cidade Universitaria, João Pessoa, PB, 58051-900

2019

Ph.D. in Mechanical Engineering

Federal University of Paraíba

- Thesis title: Optimization of computer vision techniques for multi-directional pedestrian flow estimation through embedded devices.

Keywords: Computer vision, object detection, pedestrian traffic management and urban trains.

Campus I - Lot. Cidade Universitaria, João Pessoa, PB, 58051-900

2013

M. Sc. in Computer Science

Federal University of Paraíba

- Dissertation title: A case study to aid in the definition of a portability model in the implementation of simulated algorithms in real robots.

- Keywords: Robotics, autonomous mobile robots, anti-collision algorithm, simulators.

R. Baraúnas, 351 - Universitário, Campina Grande - PB, 58429-500

2009

B. Sc. in Computer Science

State University of Paraíba

- Title: Contribution of educational robotics: an interdisciplinary learning experience in elementary school.

- Keywords: Interdisciplinarity, educational robotics, alternative and proprietary material.

COURSES & CERTIFICATIONS

- Introduction to Artificial Intelligence by IBM
- Python for Data Science and AI by IBM
- Machine Learning with Python by IBM
- Introduction to Deep Learning & Neural Networks with Keras by IBM
- Deep Neural Networks with PyTorch by IBM
- Building Deep Learning Models with TensorFlow by IBM
- AI Capstone Project with Deep Learning by IBM
- Math for Machine Learning by AWS
- Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization by deeplearning.ai
- Structuring Machine Learning Projects by deeplearning.ai
- Natural Language Processing with Classification and Vector Spaces by deeplearning.ai
- Agile Software Development

LANGUAGES

English
Advanced

SKILLS

Development
Software Engineering
Data Analysis
Linux/Unix Experience

Researcher
Deep Learning Experience
High academic background
