Jeovane Honório Alves

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https://scholar.google.com.br/citations?user=bervpJsAAAAJ

Summary

I have a Ph.D. in Computer Science from the Federal University of Parana (UFPR). Research and professional interests are artificial intelligence (AI), computer vision (CV), machine learning (ML), deep learning (DL), neural architecture search (NAS), evolutionary computation, image processing, natural language processing (NLP), and time series analysis.

My thesis was focused on ML, CV and NAS applied to natural and medical images (e.g., CIFAR, ImageNet, and CHAOS challenge datasets). I also work with several frameworks, like PyTorch, Keras, SciKit-Learn, ITK, Keras, Pandas, Detectron, NumPy, SciPy, and OpenCV, for different tasks, like image classification, object detection, segmentation, regression, time series forecasting, and clustering.

Experience

Doctoral Fellow

Universidade Federal do Paraná

Oct 2016 - Dec 2021 (5 years 3 months)

- Generation of custom Deep Learning (DL) models, i.e., neural architecture search (NAS), for Computer Vision (CV) problems
- Application of evolutionary computation techniques for an optimized NAS
- Image classification and segmentation of natural and volumetric (3D) medical images (e.g., CIFAR, ImageNet, CHAOS challenge)
- Strong use of PyTorch and its eager execution for dynamic NAS and model optimization
- Employment of different convolutional (e.g., dilated, separable depthwise, grouped) and auxiliary operations (e.g., batch norm, poolings)
- Strong data augmentation for image classification and segmentation
- Optimization methods like SGD, Adam, cosine annealing, one-cycle scheduler, automatic mixed-precision

Graduate Research Fellow

Universidade Federal do Paraná

Feb 2014 - Aug 2016 (2 years 7 months)

- Conventional feature engineering (features as tabular data) for image classification
- Image processing (i.e., superpixels) for ROI segmentation
- Usage of the Insight Toolkit (ITK) for medical image processing (C++)
- Usage of OpenCV for image processing
- Scikit-Learn and Shark-ML for machine learning
- Usage of classification methods like Random Forest and SVM
- MongoDB for data storage

Support Analyst

MTM Sistemas

Jan 2013 - Jan 2014 (1 year 1 month)

Scientific Initiation Fellow
Universidade Federal do Paraná
Nov 2011 - Dec 2012 (1 year 2 months)

Technical Support
Universidade Federal do Paraná
May 2011 - Oct 2011 (6 months)

Education

Universidade Federal do Paraná
Doctor of Philosophy (Ph.D.), Computer Science
Oct 2016 - Sep 2021
Thesis titled "Efficient Evolutionary-based Neural Architecture Search in few GPU hours for Image Classification and Medical Image Segmentation"

Universidade Federal do Paraná
Master's degree, Electrical and Electronics Engineering
Feb 2014 - Aug 2016
Dissertation titled "A Lung Cancer Detection Approach Based on Shape Index and Curvedness Superpixel Candidate Selection"

Universidade Federal do Paraná
Technologist, Systems Analysis and Development
2011 - 2013
Undergraduate thesis titled "Smart Home Automation" (in Portuguese)

Skills

Machine Learning • Computer Vision • Image Processing • Python • C++ Language • PyTorch • Deep Learning • Neural Architecture Search (NAS) • Convolutional Neural Networks (CNN) • Natural Language Processing (NLP)