Jesimon Barreto Santos

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Education

Federal Institute of Sergipe — Lagarto, Sergipe, Brazil
High School and Technical Education in Computer Systems Networking and Telecommunications 2011 - 2014

Federal University of Minas Gerais — Belo Horizonte, Minas Gerais, Brazil
Bachelor's degree in Systems Engineering — 2016 - Present

Work Experience

Touching the Air Research Group — Lagarto, Segipe, Brasil
Undergraduate student researcher — 2012 - 2016

- Research and development in human computer interaction (Kinect sensor applications)
- Programming in java

Smart Sense Laboratory — Belo Horizonte, Minas Gerais, Brazil
Undergraduate student researcher — 2016 - Present

- Human activity recognition in video
- Human activity recognition based on wearable sensor data
- Programming in python

Skills (novice, intermediate, proficient or expert)

C/C++:	Expert
Python:	Proficient
Java:	Proficient
Research and Development:	Proficient
English language:	Proficient

Projects

HAR-HEALTH: Human Activities Recognition Associated with Chronic Diseases
(2017-2018) The objective of this project is the research and development of methods and algorithms capable of automatically recognizing human activities related to chronic diseases (diabetes, hypertension, obesity, and aging) from visual information, signals captured by sensors from personal mobile devices, and signals captured by sensors installed in the environments. I worked as an undergraduate research assistant, participated in data collection and annotation. Additionally, I worked on research, implementation, and validation of literature methods (deep learning). (Samsung Brazil financed this project)

SMS: Research and Development of an Intelligent Surveillance System Applied to Oil Platforms
(2018-Present) This project has two objectives. i) the study, development, and evaluation of algorithms to be incorporated into the surveillance system prototype capable of automatically analyzing the video and ii) creation, development, implantation, and experimental validation of an intelligent surveillance system prototype capable of monitoring the workers in regions of the oil exploration platform from visual data. I worked as a researcher and developer with master and doctoral students. I performed the tasks of capturing and annotating data, researching and implementing methods in the literature. (Petrobras financed this project)

Academic publishing and Patents

Sena, J., Barreto, J., Caetano, C., Cramer, G., & Schwartz, W. R. (2020). Human Activity Recognition based on Smartphone and Wearable Sensors Using Multiscale DCNN Ensemble. Neurocomputing.

SENA, Jessica; SANTOS, Jesimon Barreto; SCHWARTZ, William Robson. Multiscale dcnn ensemble applied to human activity recognition based on wearable sensors. In: 2018 26th European Signal Processing Conference (EUSIPCO). IEEE, 2018. p. 1202-1206.

de Melo, V. H. C., Santos, J. B., Júnior, C. A. C., de Souza, J. S., Penatti, O. A. B., & Schwartz, W. R. (2018, October). Object-based Temporal Segment Relational Network

for Activity Recognition. In 2018 31st SIBGRAPI Conference on Graphics, Patterns and Images (SIBGRAPI) (pp. 103-109). IEEE.

Method for Video Recognition Capable of Encoding Spatial and Temporal Relationships of Concepts using Contextual Features United States Patent and Trademark Office 2020

Video Recognition Method Able to Encode Concepts Temporal and Spatial Relations using Contextual Information (in portuguese) INPI - Instituto Nacional da Propriedade Industrial 2019