

PEDRO TABACOF

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PROFESSIONAL EXPERIENCE

Research Engineer Accenture Labs 2019-present
Knowledge graph embeddings with TensorFlow. Counterfactual explanations.

Senior Data Scientist Nubank 2018-2019
Risk and severity modelling using the latest machine learning tools (in Python). Deployed models that had significant impact on the business (credit lines). Policy and NPV framework modelling, bridging the gap from models to decisions. ETL and data engineering in Spark / Scala.

Senior Data Scientist iFood 2017-2018
Anti-fraud predictive modeling using PySpark and XGBoost (over four million BRL in yearly projected savings). A/B testing statistical analysis using mobile analytics data. Cross-selling recommendations using association rules.

Researcher (part-time) Motorola Mobility 2017
Applied predictive modeling for smartphone bug detection and classification using Scikit-learn. Information retrieval using vector-space models. Natural language processing for feature extraction using NLTK and Word2Vec. Development of web service using Flask to serve predictions and provide interpretability with LIME.

Co-founder Datart Data Science 2016-2017
Development of Call.AI, web application in Flask for speech analytics and audio retrieval. Speech recognition using Google Cloud Platform and TensorFlow. Data science consulting work in predictive modeling for e-commerces, including prediction of conversion rates, churn, and customer lifetime value using Sklearn, XGBoost, and Lifetimes.

R&D engineer I.Systems Industrial Automation 2013-2016
First engineer of I.Systems, helping it grow from 6 to 30+ employees. Research and development of many applications, including machine learning models for industrial data and stochastic process control modules. Time series analysis. Creation of a Lua based scripting language for process control. Principal investigator at a FAPESP grant. Management of two researchers and three interns.

Internship I.Systems Industrial Automation 2012-2013
Developed a dynamic simulator of industrial processes using system identification.

EDUCATION

PhD, Computer Engineering 2017-present
RECOD lab., University of Campinas (Unicamp), Brazil
110 academic and 2 media citations

Master's, Computer Engineering 2015-2017
RECOD lab., University of Campinas (Unicamp), Brazil
GPA: 4.0/4.0
Exploring Adversarial Images in Deep Neural Networks

Bachelor of Science, Computer Engineering 2008-2013
Unicamp, Brazil
Graduated with distinction (top 10% of the class)

International experience

University exchange student	Bishop's University, QC, Canada	2010
High school exchange student	Coon Rapids High School, MN, USA	2006

ACADEMIC EXPERIENCE

Academic internship ČVUT v Praze, Czech Republic 2012

Developed a photovoltaic cell simulator, including a graphical user interface in Python.

Undergraduate research LSC, IC, Unicamp 2010-2011

Worked on a multi-core secure cryptoprocessor under supervision of prof. Guido Araújo. Project funded by Facti.

Teaching assistant IC, Unicamp

Data Structures (MC202). 2016

Algorithms and Computer Programming (MC102) 2009-2010

PUBLICATIONS

Pedro Tabacof, Julia Tavares, and Eduardo Valle. "Adversarial images for variational autoencoders". *NIPS Workshop on Adversarial Training*, 2016. *Spotlight presentation*.

Ramon Oliveira*, Pedro Tabacof*, and Eduardo Valle. "Known Unknowns: Uncertainty Quality in Bayesian Neural Networks". *NIPS Workshop on Bayesian Deep Learning*, 2016.

Alan Godoy, Pedro Tabacof, and Fernando J. Von Zuben. "The role of the interaction network in the emergence of diversity of behavior". *PloS one 12.2*, 2017.

Pedro Tabacof and Eduardo Valle. "Exploring the space of adversarial images". *IEEE International Joint Conference on Neural Networks*, 2016.

Pedro Tabacof, Tim Busbice, and Stephen D. Larson. "Beyond the connectome hairball: Rational visualizations and analysis of the C. elegans connectome as a network graph using hive plots". *Frontiers in Neuroinformatics*, 20:55–65, 2013.

CERTIFICATIONS

Deep Learning Summer School (1/3 acceptance rate), Université de Montréal, 2016.

World Congress on Computational Intelligence, Vancouver, 2016. *Received IEEE-CIS travel grant*.

Machine Learning Summer School, UT Austin, 2015.

Green Belt Six Sigma, EDTI Campinas, 2014.

Graduate studies on Automation and Intelligent Systems, FEEC, 2013.

COMPUTER SKILLS

Languages: Python, C/C++, Lua, MATLAB, R, SQL, JavaScript, Scala

Frameworks: Scikit-learn, XGBoost, Pandas, Spark, Keras, Flask, Torch7, Stan, CUDA, D3.js

Miscellaneous: Git, Excel, L^AT_EX

LANGUAGES

Native: Portuguese

Fluent: English

Beginner: French

Last updated: August 14, 2019