
Diogo Ferreira Pacheco

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EDUCATION

- 08/13 – 12/17 ***Doctor of Philosophy, Computer Science, GPA 3.88***
Florida Institute of Technology, Melbourne, FL - USA.
Area: Data Science / Network Science
Thesis: “Information Densification of Social Constructs via Behavior Analyses of Social Media Users - A Study on Twitter”
- 08/06 – 07/08 ***Master of Science, Computer Engineering, GPA 3.5***
Polytechnic School of Pernambuco, Recife – PE, Brazil.
Area: Computational Intelligence and Multi-Objective Optimization
Dissertation: “An Evolutionary Multi-Objective Approach to Decision Support in Sugarcane Harvest”
- 08/01 – 07/06 ***Bachelor of Science, Computer Engineering, CPI 8.38***
Polytechnic School of Pernambuco, Recife – PE, Brazil.
Dissertation: “Decision Support in Intelligent Systems for Agricultural Crops”

CONTINUING EDUCATION

- 09/14 – 11/14 ***Social Psychology***
Wesleyan University (via Coursera.org)

AWARDS

- 2017 ***Outstanding Student of the Year***
Florida Institute of Technology, Melbourne, FL - USA.

SKILLS

Programming: Python, C#, Java, SQL, NoSQL, R, Matlab.

Softwares: Gephi, MongoDB, MySQL, SQL Server, Visual Studio, Eclipse, R Studio, MapWindow GIS, SVN, Latex.

Languages: English, Portuguese.

WORK EXPERIENCE

- 2018 – present ***Postdoctoral Fellow at Indiana University***
Postdoctoral Fellow at the Center for Complex Networks and Systems Research (CNetS) at Indiana University (Bloomington) under the supervision of YY Ahn, Fil Menczer and Alessandro Flammini. Working on the SocialSim DARPA Grant, aiming to develop a cognitive agent simulation framework for studying social behavior in online information environments. This project is a collaboration with colleagues at the USC Information Sciences Institute (Emilio Ferrara, PI; Kristina Lerman and Jim Blythe, co-PIs) and the University of Notre Dame (Tim Weninger, co-PI).
- 2017 – 2017 ***Army Research Office (ARO) at FIT***
Graduate research assistant of the “Predicting Human Dynamics under Restrictions of Partial or Incomplete Information” project. This is a collaboration between the PI’s Prof. Gourab Goshal at University of Rochester and Prof. Ronaldo Menezes at Florida Tech. We are using Information Theory, Complex Networks, and Machine Learning to delve into better predictive models of human mobility.

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- 2016 – 2017 ***Civil Engineering-Construction Mgmt Department at FIT***
Graduate research assistant of the Florida Public Hurricane Loss Model (FPHLM) project. I have to elicit requirements from interviews with the client, design and implement the system responsible for generating the weighted-vulnerability matrices.
- 2014 – 2014 ***Civil Engineering-Construction Mgmt Department at FIT***
During Summer, I worked as webmaster and implementing flow charts of the Florida Public Hurricane Loss Model (FPHLM).
- 2010 – 2013 ***Radix Software and Engineering***
I worked in several software development projects, mainly, in the Oil & Gas, Entertainment and Steel industries. I actuated in many different phases of the development process as project coordinator, business analyst, and test leader.
- 2008 – 2010 ***Chemtech – A Siemens Business***
I worked in several software development projects, mainly, in steel industry and power sector, as business analyst, software developer and test leader.
- 2004 – 2007 ***CESAR – Center of Studies and Advanced Systems from Recife***
I began my software development career focusing on coding, requirements, and tests. I worked on web-based projects and mobile development.
- 2001 – 2001 ***JAMBO –Entrance Preparation Courses***
Tutoring math and physics for college entrance preparation courses.

PRESENTATIONS

- 06/2017 **Using Social Media to Assess Neighborhood Social Disorganization: A Case Study in the United Kingdom.**
In: 2nd NetCrime: Symposium on the Structure and Mobility of Crime, a NetSci2017 Satellite, Indianapolis/USA.
- 05/2017 **Language as a Measure of Welfare.**
In: 30th Florida Artificial Intelligence Research Society Conference (FLAIRS), Marco Island/USA.
- 05/2017 **Using Social Media to Assess Neighborhood Social Disorganization: A Case Study in the United Kingdom.**
In: 30th Florida Artificial Intelligence Research Society Conference (FLAIRS), Marco Island/USA.
- 07/2015 **Football Conversations: What Twitter Reveals about the 2014 World Cup.**
In: 30th Florida Artificial Intelligence Research Society Conference (FLAIRS), Marco Island/USA.
- 01/2015 **Dynamics of Fans Borders During 2014 FIFA World Cup.**
In: NetSciX 2015: International School and Conference on Network Science, Rio de Janeiro/Brazil.
- 05/2014 **Using Interactions in the Quantification of Media Bias.**
In: 2014 ASE BIGDATA/SOCIALCOM/CYBERSECURITY Conference, Stanford University, Stanford/USA.
- 09/2008 **How Preferences Affect Productivity in the Sugarcane Harvest Problem a Comparative Study of a Two-Steps MOEA.**
In: 8th International Conference on Hybrid Intelligent Systems (HIS 2008), Barcelona/Spain.

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- 05/2008 **Including Multi-Objective Abilities in the Hybrid Intelligent Suite for Decision Support.**
In: 2008 World Congress In Computational Intelligence (IJCNN - International Joint Conference On Neural Networks), *Hong Kong/China*.

PUBLICATIONS

- 2019 1. BLYTHE, Jim; BOLLENBACHER, John; HUANG, Diana; HUI, Pik-Mai; KROHN, Rachel; *PACHECO, Diogo*; MURIC, Goran; SAPIENZA, Anna; TREGUBOV, Alexey; YONG-YEOL, Ahn; FLAMMINI, Alessandro; LERMAN, Kristina; MENCZER, Filippo; WENINGER, Tim; FERRARA, Emilio. **Massive Multi-Agent Data-Driven Simulations of the GitHub Ecosystem.** In: Practical Applications of Agents and Multi-Agent Systems (PAAMS), 17th International Conference on, Ávila, Spain, June, 2019.
2. BLYTHE, Jim; FERRARA, Emilio; HUANG, Diana; LERMAN, Kristina; MURIC, Goran; SAPIENZA, Anna; TREGUBOV, Alexey; *PACHECO, Diogo*; BOLLENBACHER, John; FLAMMINI, Alessandro; HUI, Pik-Mai; MENCZER, Filippo. **The DARPA SocialSim Challenge: Massive Multi-Agent Simulations of the Github Ecosystem.** In: Proceedings of the 18th International Conference on Autonomous Agents and MultiAgent Systems (AAMAS), 2019, page 1835.
- 2018 3. BARBOSA, Hugo; OLIVEIRA, Marcos; *PACHECO, Diogo F.*; MENEZES, Ronaldo; GHOSHAL, Gourab . **The Influence of the Circadian and Ultradian Rhythms to Human Mobility: Empirical Evidences from Location-Based Check-Ins.** In: NERCCS 2018: First Northeast Regional Conference on Complex Systems, Binghamton, NY, USA, April 12-13, 2018.
- 2017 4. *PACHECO, Diogo F.*; SAHA, Priya; LIMA-NETO, F. B.; MENEZES, R. . **Sensing Language Relationships from Social Media.** In: 2017 IEEE SmartWorld, Ubiquitous Intelligence and Computing, Advanced and Trusted Computed, Scalable Computing and Communications, Cloud and Big Data Computing, Internet of People and Smart City, August 4-8, 2017.
5. *PACHECO, Diogo F.*; PINHEIRO, Diego; CADEIRAS, Martin; MENEZES, Ronaldo. **Characterizing Organ Donation Awareness from Social Media.** In: Data Engineering Workshops (ICDEW), 2017 IEEE 33rd International Conference on, San Diego, California, USA, April 19-22, 2017.
6. *PACHECO, Diogo F.*; OLIVEIRA, Marcos; MENEZES, Ronaldo. **Using Social Media to Assess Neighborhood Social Disorganization: A Case Study in the United Kingdom.** In: the 30th Florida Artificial Intelligence Research Society Conference, Marco Island, Florida, USA, May 22-24, 2017.
7. SAHA, Priya; *PACHECO, Diogo F.*; MENEZES, Ronaldo. **Language as a Measure of Welfare.** In: the 30th Florida Artificial Intelligence Research Society Conference, Marco Island, Florida, USA, May 22-24, 2017.
- 2016 8. *PACHECO, Diogo F.*; PINHEIRO, Diego; LIMA NETO, F. B.; RIBEIRO, Eraldo; MENEZES, R. . **Characterization of Football Supporters from Twitter Conversations.** In: 2016 IEEE/WIC/ACM International Conference on Web Intelligence (WI' 16), October 13-16, 2016.
- 2015 9. *PACHECO, Diogo F.*; LIMA NETO, F. B.; MOYANO, L. G.; MENEZES, R. . **Football Conversations: What Twitter Reveals about the 2014 World Cup.** In: IV Brazilian Workshop on Social Network Analysis and Mining (BraSNAM 2015), Recife - Brazil, July 21-23, 2015.
- 2014 10. *PACHECO, Diogo*; ROSE, D; LIMA NETO, F. B.; MENEZES, R.. **Using Interactions in the Quantification of Media Bias.** In: 2014 ASE BIGDATA / SOCIALCOM / CYBERSECURITY Conference, Stanford University, May 27-31, 2014.
- 2008 11. *PACHECO, Diogo F.*; OLIVEIRA, F. R. S. ; LIMA NETO, F. B. . **Including Multi-Objective Abilities in the Hybrid Intelligent Suite for Decision Support.** In: 2008

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- World Congress In Computational Intelligence (IJCNN - International Joint Conference On Neural Networks), 2008, Hong Kong.
12. *PACHECO, Diogo F.; LIMA NETO, F. B. . A Fair Comparison of Representations, Operators and Algorithms for the Sugarcane Harvest Problem.* In: IEEE International Conference on Systems, Man, and Cybernetics (SMC2008), 2008, Singapore.
13. *PACHECO, Diogo F.; LUCAS, T. D. P. ; LIMA NETO, F. B. . How Preferences Affect Productivity in the Sugarcane Harvest Problem a Comparative Study of a Two-Steps MOEA.* In: 8th International Conference on Hybrid Intelligent Systems (HIS 2008), 2008, Barcelona.
- 2007 14. *PACHECO, Diogo F.; LUCAS, T. D. P. ; LIMA NETO, F. B. . How to Obtain Fair Managerial Decisions in Sugar Cane Harvest Using NSGA-II.* In: International Conference on Hybrid Intelligent Systems (HIS`07), 2007, Kaiserslautern, Germany.
15. *OLIVEIRA, F. R. S.; PACHECO, Diogo F.; LIMA NETO, F. B. . Hybrid Intelligent Suite For Decision Support in Sugarcane.* In: 6.Congresso Brasileiro de Agro-Informática (SBIAgro), 2007, São Pedro.
16. *LINS, A. J. C. C. ; CALDAS, B. J. B. ; BASTOS FILHO, C. J. A. ; CARVALHO, D. F. ; PACHECO, Diogo F.; LIMA NETO, F. B. . A Novel Approach for Wavelength Assignment in Optical Links Based On Modified Genetic Algorithms.* In: I Simpósio Brasileiro de Inteligência Computacional (SBIC), 2007, Florianópolis.
17. *LIMA NETO, F. B. ; OLIVEIRA, F. R. S. ; PACHECO, Diogo F. . Hybrid Intelligent Suite for Decision Support.* In: Seventh International Conference on Intelligent Systems Design and Applications (ISDA), 2007, Rio de Janeiro, Brazil.
- 2006 18. *OLIVEIRA, F. R. S. ; PACHECO, Diogo F.; LEONEL, A. ; LIMA NETO, F. B. . Intelligent Support Decision in Sugar Cane Harvest.* In: IV World Congress On Computers In Agriculture (WCCA2006), 2006, Orlando.
- 2005 19. *PACHECO, Diogo F. ; REGUEIRA, F. S. ; LIMA NETO, F. B. . Utilização de Redes Neurais Artificiais em Colheitas de Cana-de-açúcar para Predição de TCC, TCH e Fibra.* ALCOOLbrás, São Paulo, p. 60 - 63, 01 mar. 2005. (In portuguese)

RESEARCH

Member of: (i) **Networks & agents Network (NaN)** group at Indiana University, USA; and (ii) **BioComplex Lab** at Florida Institute of Technology, USA.

Invited researcher of **Computational Intelligence Research Group** at University of Pernambuco, Brazil.