

Curriculum Vitæ

Johnnatan Messias Peixoto Afonso

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Education **Ph.D in Computer Science** (2018 – present)
Max Planck Institute for Software Systems (MPI-SWS), Saarbrücken, Germany
Advisor: Dr. Krishna Gummadi.

Master's Degree in Computer Science (2015 – 2017)
Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Brazil
M.Sc. in Computer Science, March 2015 – May 2017.
Thesis: Characterizing Interconnections and Linguistic Patterns in Twitter
Advisor: Dr. Fabrício Benevenuto.
Interests: Data Analysis, Data Science, Sentiment Analysis, Social Networks.

Sandwich Bachelor's Degree in Computer Science (2009 – 2014)
Universidade Federal de Ouro Preto (UFOP), Ouro Preto, Brazil. GPA (0 – 10): 8.0
Eötvös Loránd University (ELTE), (2013/2 – 2014/2), Budapest, Hungary. GPA (0 – 5): 4.0
Thesis: Framework for Unmanned Air Vehicle (UAV) Navigation System. (in Portuguese)
Advisor: Dr. Ricardo Rabelo.

Intensive English Course, July – September 2013
Eötvös Loránd University (ELTE), Budapest, Hungary

Experience **Data Scientist and Full Stack Software Engineer at Kunumi**, Belo Horizonte, Brazil - June 2017 – July 2018.

Research Internship at Max Planck Institute for Software Systems (MPI-SWS), Saarbrücken, Germany.
1st: February – May 2016.
2nd: February – May 2017.
Advisor: Dr. Krishna P. Gummadi.

Research Theory of Social Computing and Data Analysis at Universidade Federal de Minas Gerais (UFMG), Belo Horizonte, Brazil - March 2015 – May 2017.

Internship at Belux Csoport Kft, Budapest, Hungary. 2014.

Skills **Programming Languages:**

C, C++, Java, Python, R.

Mobile Development:

Android SDK

DBMS:

MySQL, Oracle, PostgreSQL.

Web Development:

EJB, HTML, JavaEE, JPA, jQuery, Javascript, JSON, PHP, XML.

Other Tools:

Git, LibSVM, Matlab, Matplotlib, NLTK, Node.js, Numpy, Pandas, QT, Scikit-Learn, SVN.

Boards:

Arduino, Raspberry PI.

Teaching

Experience **Universidade Federal de Minas Gerais (UFMG)**, Belo Horizonte, MG, Brazil. 2016.
Teaching Assistant for Analysis and Algorithm Design, August 2016 – January 2017.

Programa Nacional de Acesso ao Ensino Técnico e Emprego (Pronatec), Mariana, MG, Brazil. 2013.
Design and Analysis of Algorithms for High School students at Escola Estadual Dom Silvério.
Operating System for High School students at Escola Estadual Dom Silvério.
Introduction to Hardware for High School students at Escola Estadual Dom Silvério.

Developed Applications

- Eleições sem Fake (<https://www.eleicoessemfake.dcc.ufmg.br>): Many systems to help with the Fake news problem.
- Who Makes Twitter Trends (<http://twitter-app.mpi-sws.org/who-makes-trends/>): Demographic of Trend Promoters is the distribution (or combination) of demographic groups (such as middle-aged white men, young asian women, adolescent black men) in the crowd promoting (or posting about) a topic before the topic becomes Trending on Twitter. Here, we are only considering US based Twitter users whose tweets on the trends appear in the 1% random sample distributed by Twitter.
- Search Political Leaning of Twitter Users (<http://twitter-app.mpi-sws.org/search-political-bias-of-users/>): You can login with your Twitter credentials, to see the political leaning (between democratic and republican) inferred for you. You can also search for other Twitter users and check their political leanings.
- Secondary Digital Footprint (<http://twitter-app.mpi-sws.org/footprint/>): Twitter is social, people converse with you by mentioning your username in their tweets (e.g., while replying to your tweet or giving a shout-out to you). These conversations are your secondary digital footprint, even if you delete your account or delete selected tweets, this secondary footprint is not deleted automatically and leaks information about you. Check what your secondary digital footprint reveals about you and your content.

Awards and Honors

- Granted with a scholarship for the Brazilian Scientific Exchange Program in Budapest, Hungary, spending fourteen months studying at an European University.
- Motion of applauses for developing the SmartHome project, during the exchange program Science Without Borders in Budapest - Hungary - Câmara de Mariana, MG, Brazil - (2014).
- Honorable Mention Article Sigam-me os Bons! Transformando robôs em pessoas influentes no Twitter, Brazilian Workshop on Social Network Analysis and Mining (BraSNAM'12)
- 3rd place in the XXXII Concurso de Trabalhos de Iniciação Científica (CTIC2013), XXXIII Congresso da Sociedade Brasileira de Computação (CSBC2013).
- First (1st) place in the DECOM Competition of Minimum Paths at Universidade Federal de Ouro Preto, Prof. Dr. Haroldo Gambini Santos.
- Best paper nominee: CTIC'13, BraSNAM'12.

Press Coverage

Some of my scientific efforts have been covered by news media and specialized blogs, including The New York Times, The Huffington Post, BBC Brasil, and Folha de São Paulo. Links to these news articles and my scientific publications can be found at <http://johnatan.me>.

**Selected
Publications**

Most important publications (Google Scholar: <http://scholar.johnnatan.me>)

(Mis)Information Dissemination in WhatsApp: Gathering, Analyzing and Countermeasures.
Gustavo Resende, Philipe Melo, Hugo Sousa, Johnnatan Messias, Marisa Vasconcelos, Jussara Almeida, and Fabrício Benevenuto. In Proceedings of the 28th Web Conference (WWW'19). San Francisco, USA. May, 2019.

Search Bias Quantification: Investigating Political Bias in Social Media and Web Search.
Juhi Kulshrestha, Motahhare Eslami, Johnnatan Messias, Muhammad Bilal Zafar, Saptarshi Ghosh, Krishna P. Gummadi, and Karrie Karahalios. Information Retrieval Journal. Springer. Volume 22, Issue 1-2, April 2019. (3 citation).

White, Man, and Highly Followed: Gender and Race Inequalities in Twitter.
Johnnatan Messias, Pantelis Vikatos, and Fabrício Benevenuto. In Proceedings of the IEEE/WIC/ACM International Conference on Web Intelligence (WI'17). Leipzig, Germany. August 2017. (11 citations).

An Evaluation of Sentiment Analysis for Mobile Devices.
Johnnatan Messias, João P. Diniz, Elias Soares, Miller Ferreira, Matheus Araújo, Lucas Bastos, Manoel Miranda, and Fabrício Benevenuto. In Springer Nature Social Network Analysis and Mining. Volume 7, Issue 1, 2017.

Longitudinal Privacy Management in Social Media: The Need for Better Controls.
Mainack Mondal, Johnnatan Messias, Saptarshi Ghosh, Krishna P. Gummadi, and Aniket Kate. IEEE Internet Computing (Special Issue on Usable Privacy & Security). Volume 21, Issue 3, May-June, 2017. (1 citation).

Demographics of News Sharing in the U.S. Twittersphere.
Julio C. S. Reis, Haewoon Kwak, Jisun An, Johnnatan Messias, and Fabrício Benevenuto. In Proceedings of 28th ACM Conference on Hypertext and Social Media (HT'17). Prague, Czech Republic. July 2017. (10 citations).

Linguistic Diversities of Demographic Groups in Twitter.
Pantelis Vikatos, Johnnatan Messias, Manoel Miranda, and Fabrício Benevenuto. In Proceedings of 28th ACM Conference on Hypertext and Social Media (HT'17). Prague, Czech Republic. July 2017. (4 citations).

Who Makes Trends? Understanding Demographic Biases in Crowdsourced Recommendations.
Abhijnan Chakraborty, Johnnatan Messias, Fabrício Benevenuto, Saptarshi Ghosh, Niloy Ganguly, and Krishna P. Gummadi. In Proceedings of the Int'l AAAI Conference on Web and Social (ICWSM'17). Montreal, Canada. May 2017. (27 citations).

Quantifying Search Bias: Investigating Sources of Bias for Political Searches in Social Media.
Juhi Kulshrestha, Motahhare Eslami, Johnnatan Messias, Muhammad Bilal Zafar, Saptarshi Ghosh, Krishna P. Gummadi, and Karrie Karahalios. In Proceedings of the ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW'17). Portland, Oregon, USA, February 2017. (46 citations).

From Migration Corridors to Clusters: The Value of Google+ Data for Migration Studies.
Johnnatan Messias, Fabrício Benevenuto, Ingmar Weber, and Emilio Zagheni. In Proceedings of the IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM'16). San Francisco, USA. August 2016. (12 citations)

Towards Sentiment Analysis for Mobile Devices
Johnnatan Messias, João P. Diniz, Elias Soares, Miller Ferreira, Matheus Araújo, Lucas Bastos, Manoel Miranda, and Fabrício Benevenuto. In Proceedings of the IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM'16). San Francisco, USA. August 2016. (7 citations)

Forgetting in Social Media: Understanding and Controlling Longitudinal Exposure of Socially Shared Data.
Mainack Mondal, Johnnatan Messias, Saptarshi Ghosh, Krishna P. Gummadi, and Aniket Kate. In Proceedings of the 12th Symposium on Usable Privacy and Security (SOUPS'16), Denver, CO, USA, June 2016. (18 citations)

You followed my bot! Transforming robots into influential users in Twitter.
Johnnatan Messias, Lucas Schmidt, Ricardo Rabelo, and Fabrício Benevenuto. In First Monday. Volume 18, Issue 7, July, 2013. (96 citations).