Jorge Henrique Piazentin Ono

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Research Interests

Visual Analytics, Human-Computer Interaction, Explainable AI, Model Validation

Education

2015–2021 **PhD in Computer Science**, *New York University*, Tandon School of Engineering, Brooklyn, New York. Advisor: Claudio Silva, Ph.D., GPA – 3.97 / 4.0. Title: Visualization Methods for Sports Data Collection and Analysis.

2013–2015 **Masters in Computer Science**, *University of Sao Paulo*, Institute of Mathematical and Computer Science, Sao Carlos, Brazil. Advisor: Gustavo Nonato, Ph.D., *GPA – 10.0 / 10.0*. Title: Visualization of similarities in song data sets.

2009–2012 **Bachelor Degree in Computer Science**, *Sao Paulo State University*, School of Sciences, Bauru, Brazil, *GPA – 8.8 / 10.0*.

Professional Experience

2024–present **Senior Research Scientist**, *Robert Bosch LLC*, Sunnyvale.

- 01/01/2024 - present
- Address: Santa Trinita Ave, Sunnyvale, CA 94085
- Researching Visual Analytics and eXplainable AI methods for model validation and Human-Assisted AI.

2022–2023 **Research Scientist 2**, *Robert Bosch LLC*, Sunnyvale.

- 01/01/2023 - 31/12/2023
- Address: Santa Trinita Ave, Sunnyvale, CA 94085
- Researching Visual Analytics and eXplainable AI methods for model validation and large scale data analysis.

2021–2022 **Research Scientist**, *Robert Bosch LLC*, Sunnyvale.

- 09/08/2021 - 31/12/2022
- Address: Santa Trinita Ave, Sunnyvale, CA 94085
- Researching data visualizations for model validation, data exploration and eXplainable Machine Learning.

2015–2021 **Research Assistant**, *NYU Tandon School of Engineering*, New York City.

- 09/01/2015 - 07/22/2021
- Address: 6 Metrotech Center, Brooklyn, NY 11201
- Researched data visualizations for Sports Analytics and eXplainable Machine Learning (XAI). Developed data visualizations using JavaScript, D3, React and Python for the analysis of Baseball, Soccer, and Counter Strike games. Worked on data visualizations for the explanation and exploration of Machine Learning models generated from AutoML.

Spring 2020 **Teaching Assistant**, *NYU Tandon School of Engineering*, New York City.

- 02/01/2020 - 05/10/2020. Visualization: Connections with Machine Learning
- Address: 6 Metrotech Center, Brooklyn, NY 11201
- Taught classes and practical labs on eXplainable Machine Learning and Model Visualization. Graded student assignments.

Summer 2019 **Machine Learning Intern**, *Facebook*, Seattle.

- 06/03/2019 - 08/23/2019
- Address: 1101 Dexter Ave N, Seattle, WA 98109
- Trained Deep Learning models for image and video content retrieval using Python and the PyTorch framework.

Summer 2017 **Research Intern**, *AT&T Labs Research*, New York City.

- 06/06/2017 - 08/25/2017.
- Address: 33 Thomas Street, NYC, NY 10013
- Developed web-based data visualizations for time series analysis using D3 and JavaScript. Wrote Apache scripts for data summarization and aggregation.

2013–2014 **Teaching Assistant**, *University of Sao Paulo*, Sao Paulo, Brazil.

- 08/01/2014 - 12/31/2014. Algorithms and Data Structures I.
- 03/01/2014 - 07/31/2014. Computational Modelling in Graphs.
- 08/01/2013 - 12/31/2013. Algorithms and Data Structures I (volunteer work).
- Address: Av. Trab. São Carlense, 400 - Centro, São Carlos - SP, 13566-590, Brazil

2008–2008 **Web Development Intern**, *Brazilian Post and Telegraph Corporation*, Bauru, Brazil.

- 02/19/2008 - 08/28/2008.
- Address: Praca Don Pedro II, 4-55, Centro. Bauru - SP, 17010-260, Brazil.
- Developed a system for electronic email invites using Adobe Flash and Adobe Cold Fusion.

Publications

2024 Zhang, X., Ono, J.P., He, W., Gou, L., Sachan, M., Ma, K.L., Ren, L., *"Slicing, Chatting, and Refining: A Concept-Based Approach for Machine Learning Model Validation with ConceptSlicer." Proceedings of the 29th International Conference on Intelligent User Interfaces. 2024.*

2022 Zhang, X., Ono, J.P., Song, H. , Gou, L., Ma, K.L., Ren, L., *SliceTeller: A Data Slice-Driven Approach for Machine Learning Model Validation*. In IEEE Transactions on Visualization and Computer Graphics. **Best paper honorable mention.**

2021 Ono, J. P., Freire, J. and Silva, C., *Interactive Data Visualization in Jupyter Notebooks*. In Computing in Science & Engineering.

2020 Ono, J. P., Castelo, S., Lopez, R., Bertini, E., Freire, J. and Silva, C., *PipelineProfiler: A Visual Analytics Tool for the Exploration of AutoML Pipelines*. In IEEE Transactions on Visualization and Computer Graphics.

2019 Ono, J.P., Gjoka A., Salamon, J., Dietrich, C. and Silva, C.T. *HistoryTracker: Minimizing Human Interactions in Baseball Game Annotation*. In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems. **Best paper honorable mention.**

2019 Santos, A., Castelo, S., Felix, C., Ono, J.P., Yu, B., Hong. R., Silva, C., Bertini, E., Freire, S. *Visus: An Interactive System for Automatic Machine Learning Model Building and Curation* . ACM SIGMOD Workshop on Human-In-the-Loop Data Analytics (HILDA), 2019. To appear.

2018 Drori, I., Krishnamurthy, Y., Rampin, R., de Paula Lourenco, R., Ono, J.P., Cho, K., Silva, C. and Freire, J. *AlphaD3M: Machine learning pipeline synthesis*. In ICML Workshop on Automatic Machine Learning. **Selected for oral presentation (4 out of 65).**

2018 Ono, J.P., Dietrich, C. and Silva, C.T. *Baseball Timeline: Summarizing Baseball Plays Into a Static Visualization*. In Computer Graphics Forum (Vol. 37, No. 3, pp. 491-501). **Best paper honorable mention.**

2016 Lage, M., Ono, J.P., Cervone, D., Chiang, J., Dietrich, C. and Silva, C.T., 2016. *Statcast dashboard: Exploration of spatiotemporal baseball data*. IEEE computer graphics and applications, (5), pp.28-37.

2016 Nakanishi, R.U., Ono, J.P., Pagliosa, P., Nonato, L.G. and Paiva, A., 2016, October. *Partial Similarity of 3D Shapes Using Cross Recurrence Plot*. In Graphics, Patterns and Images (SIBGRAPI), 2016 29th SIBGRAPI Conference on (pp. 448-454). IEEE.

2015 Ono, J.P., Sikansi, F., Corrêa, D.C., Paulovich, F.V., Paiva, A. and Nonato, L.G., 2015, August. *Concentric RadViz: visual exploration of multi-task classification*. In Graphics, Patterns and Images (SIBGRAPI), 2015 28th SIBGRAPI Conference on (pp. 165-172). IEEE. **Best paper honorable mention.**

2015 Ono, J.P., Corrêa, D., Ferreira, M., Mello, R. and Nonato, L.G., 2015. *Similarity Graph: Visual Exploration of Song Collections*. In SIBGRAPI Workshop on Visual Analytics, 2015. **Best paper honorable mention.**

Awards

2022 Best Paper Honorable Mention - IEEE Visualization Conference, 2022.

2021 Pearl Brownstein Doctoral Research Award, NYU Tandon School of Engineering

2020 Wells Fargo Campus Analytics Challenge Finalist (Top 10).

2019 Best Paper Honorable Mention - CHI Conference on Human Factors in Computing Systems 2019.

2018 Best Paper Honorable Mention - Eurovis 2018.

2015 PhD Dean's Fellowship - NYU Tandon School of Engineering.

2015 Best Paper Honorable Mention - SIBGRAPI 2015.

2015 Best Paper Honorable Mention - Workshop in Visualization - SIBGRAPI 2015.

2012 Distinguished Student - Brazilian Computer Society.

2012 Best Undergraduate Project - School of Sciences - Sao Paulo State University.

2012 Certificate of Academic Merit (Class rank: 1 of 22) - Sao Paulo State University.

2011 1st Place Programming Contest - Regional, Araçatuba - Sao Paulo.

Computer Skills

Languages	JavaScript, Python, R, C++, Matlab, Java
ML	PyTorch, TensorFlow, scikit-learn
Big Data	Hadoop, Spark
Databases	MongoDB, MySQL
Visualization	D3, React, OpenGL

References

VP and Chief Scientist	Dr. Liu Ren. Bosch Research <liu.ren@us.bosch.com> 384 Santa Trinita Ave, Sunnyvale, CA 94085
PhD Advisor	Professor Claudio T. Silva. NYU Tandon School of Engineering. <csilva@nyu.edu> 2 Metrotech Pl, 10th floor, Brooklyn, NY 11201.
Collaborator	Professor Juliana Freire. NYU Tandon School of Engineering. <juliana.freire@nyu.edu> 2 Metrotech Pl, 10th floor, Brooklyn, NY 11201.