Victor S. Bursztyn

Ph.D. Candidate at Northwestern University, former Research Scientist at Dell EMC R&D
v-bursztyn@u.northwestern.edu | +1 773-564-3109

I am generally interested in leveraging advances made in the Natural Language Processing, Machine Learning, and Information Retrieval research communities to create novel **conversational approaches to recommendation and search**.

Education

Ph.D. Candidate in Artificial Intelligence and Machine Learning at Northwestern University.
Advisor: Larry Birnbaum (Co-Director of the Intelligent Information Lab). *[Sep 2017 − Dec 2022]*

- **Research Assistant funded by Adobe, published at EMNLP 2021 and CHI 2021.**
- **GPA: 3.94.**
- Teaching Assistant for Natural Language Processing (2019, 2020, 2021).

M.Sc. in Data and Knowledge Engineering with applications to eScience at the Federal University of Rio de Janeiro (UFRJ), Brazil. *[Mar 2015 − Aug 2017]*

- **GPA: 3.84.**
- 1st place in the selection process.
- CAPES M.Sc. Scholarship.

B.Eng. in Computer and Information Engineering at UFRJ, Brazil. *[Mar 2006 − Dec 2011]*

Professional History

Research Science Intern at Adobe's Document Intelligence Lab. Mentors: Jennifer Healey, and Vishwa Vinay. *[May 2021 − Aug 2021]*

- **Invention disclosure approved for patent filing (first inventor).**

Research Scientist at Dell EMC's Brazil Research & Development Center in Big Data, working with partners from different industries (e.g., Telco, Banking) across Americas. *[Oct 2015 − May 2017]*

- **Co-author in 7 patent applications filed in the U.S. Patent Office (first inventor in 3).**

Head of Product at Nutrebem, after it raised R$ 2.3 M in a *Series A*. *[Sep 2013 − Dec 2014]*

Developer in the Personalized News Recommendation System at Globo.com. *[Feb 2013 − Sep 2013]*

- **Deployed its first recommender system for over 1M users (up to x4 increase in CTR when compared to editor's choice).**

Researcher and Developer at UFRJ's Computational Intelligence Lab. *[Mar 2010 − Dec 2011]*

- COPPETEC R&D Scholarship.

Patents Granted

Bursztyn, V., Dias, J. F., de Almeida Maximo, A., Prado, A. B., & Senra, R. D. A. (Oct. 2019). **Recommending Features for Content Planning Based on Advertiser Polling and Historical Audience Measurements.** U.S. Patent No. 10,448,120. Washington, DC: U.S. Patent and Trademark Office.

Prado, A. B., Bursztyn, V., Dias, J. F., de Almeida Maximo, A., & Ciarlini, A. E. (2021). **Method, Medium, and System for Recommending Compositions of Product Features Using Regression Trees.** U.S. Patent No. 11,030,667. Washington, DC: U.S. Patent and Trademark Office.

Bruno, D. S., Bursztyn, V., Salas, P. E. R., & Calmon, T. S. (2021). **Relevance Decay for Time-based Evaluation of Machine Learning Applications.** U.S. Patent No. 10,885,464. Washington, DC: U.S. Patent and Trademark Office.

Senra, R. D. A., Breitman, K., Prado, A. B., & Bursztyn, V. (2021). **Methods and Apparatus for a Semantic Multi-Database Data Lake.** U.S. Patent No. 10,901,973. Washington, DC: U.S. Patent and Trademark Office.

Victor S. Bursztyn

Ph.D. Candidate at Northwestern University, former Research Scientist at Dell EMC R&D

v-bursztyn@u.northwestern.edu | +1 773-564-3109

Selected Publications

Bursztyn, V. S., Healey, J., Lipka, N., Koh, E., Downey, D., & Birnbaum, L. (2021). **"It doesn't look good for a date": Transforming Critiques into Preferences for Conversational Recommendation Systems.** In Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing (**EMNLP**).

Bursztyn, V. S., Healey, J., & Vinay, V. (2021). **Gaudí: Conversational Interactions with Deep Representations to Generate Image Collections.** The 2021 NeurIPS Workshop on Machine Learning for Creativity and Design.

Bursztyn, V. S., Healey, J., Koh, E., Lipka, N., & Birnbaum, L. (2021). **Developing a Conversational Recommendation System for Navigating Limited Options.** In Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems (pp. 1-6).

Bursztyn, V. S., Nunes, M. G., & Figueiredo, D. R. (2020). **How Brazilian Congressmen Connect: Homophily and Cohesion in Voting and Donation Networks.** In Journal of Complex Networks, Oxford University Press.

Bursztyn, V. S., & Birnbaum, L. (2019). **Thousands of Small, Constant Rallies: A Large-Scale Analysis of Partisan WhatsApp Groups.** In Proceedings of the 2019 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM).

Bursztyn, V. S., Nunes, M. G., & Figueiredo, D. R. (2016). **How Congressmen Connect: Analyzing Voting and Donation Networks in the Brazilian Congress.** In Proceedings of the V Brazilian Workshop on Social Network Analysis and Mining (BraSNAM).

- **Best Paper Award (out of 66 submissions).**

Selected Press Coverage

"WhatsApp favorite among right-wing users to spread misinformation" —
Business Insider India (Online): https://www.businessinsider.in/whatsapp-favorite-among-right-wing-users-to-spread-misinformation/articleshow/70907238.cms

"Right-wing WhatsApp groups share more content, study says" —
Folha de São Paulo Newspaper (Online & Print): https://www1.folha.uol.com.br/poder/2019/08/grupos-de-direita-compartilham-mais-conteudo-aponta-estudo.shtml

"App scans corporate donations made to politicians" —
O Globo Newspaper (Online & Print): https://oglobo.globo.com/rio/bairros/aplicativo-verifica-doacoes-de-empresas-recebidas-por-politicos-19651296

"Google Chrome extension shows who funded each political campaign" —
UOL's Gizmodo (Online): https://gizmodo.uol.com.br/extensao-mostra-quem-financiou-politico/

"New digital tool reveals donors from the last electoral race" —
O Globo Newspaper (Online): https://oglobo.globo.com/brasil/nova-ferramenta-digital-revela-doadores-das-ultimas-campanhas-eleitorais-17013470

"Chapéu Eleitoral shows in Google Chrome who funded political campaigns" —
Techtudo (Online): https://www.techtudo.com.br/noticias/noticia/2015/07/chapeu-eleitoral-mostra-no-chrome-quem-financiou-campanha-de-politicos.html

Other Publications

dos Santos, C. K., Onoda, M., Bursztyn, V. S., Bastos, V. M., Fonseca, M. P., & Evsukoff, A. G. (2011). **Potential Link Suggestion in Scientific Collaboration Networks.** In Complex Networks (pp. 57-67). Springer Berlin Heidelberg. Online ISBN: 978-3-642-25501-4.

Victor S. Bursztyn

Ph.D. Candidate at Northwestern University, former Research Scientist at Dell EMC R&D
v-bursztyn@u.northwestern.edu | +1 773-564-3109

Bursztyn, V. S., Dias, J., & Mattoso, M. (2016). **Workflows Científicos com Apoio de Bases de Conhecimento em Tempo Real.** In Proceedings of the X Brazilian e-Science Workshop (BreSci 2016).

Onada, M., Bastos, V. M., Santos, C. K., Fonseca, M. P., Bursztyn, V. S., Evsukoff, A. G., & Ebecken, N. F. (2010). **Text Mining Applied to Online News.** Mecánica Computacional, Volume XXIX. Number 96. XXXI Iberian-Latin-American Congress on Computational Methods in Engineering.

Nogueira, E. T., Esperança, C., & Bursztyn, V. S. (2007). **3DbyStep: A Tool For Authoring 3D Presentations.** In Proceedings of the 20th Brazilian Symposium on Computer Graphics and Image Processing (SIBGRAPI 2007).

Nogueira, E., Gomes, D., Bursztyn, V., & Esperança, C. (2007). **Modelagem e Visualização de Protótipos 3D Apoiando Soluções da Indústria de Energia.** In Proceedings of the VI Brazilian Symposium on Computer Graphics and Digital Entertainment (SBCGAMES 2007).

Service to Profession

Reviewer for the Social Network Analysis and Mining journal (Springer).

Co-founder and treasurer of Latin@CS, an organization that provides mentorship, networking, and support to Latinx/Hispanic students in Computer Science at Northwestern University.

Mentor at the 2021 RIIAA LatAm — Meeting on Artificial Intelligence and its Applications.

Languages

Portuguese: Native.
English: Advanced.
Spanish: Advanced (studied at the Polytechnic University of Madrid for 7 months).