BRENO MATOS

M.Sc. Student in Computer Science

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EDUCATION

Master's Degree in Computer Science (Grade Average: 97/100)
UFMG, Federal University of Minas Gerais

📅 Present   ♦ Belo Horizonte, Brazil

- UFMG's Graduate Program in Computer Science is one of Brazil's oldest and most well-established in Computer Science in the country: ppgcc.dcc.ufmg.br
- **Awarded a Google Latin America Research Award**
- **M.Sc. Fellowship funded by the Public Ministry of Minas Gerais**
- Research Areas: Natural Language Processing, Computational Social Science.
- Advisors: Professor Fabrício Benevenuto, Ph.D., Professor Rodrygo L.T. Santos, Ph.D.

Bachelor's Degree in Computer Science (Grade Average: 81/100)
UFMG, Federal University of Minas Gerais

📅 Mar/2021   ♦ Belo Horizonte, Brazil

- Comprehensive Computer Science coursework. Includes, but is not limited to, Algorithm Design, Machine Learning, Natural Language Processing, Quantum Computing, Compilers, Data Science, and Computer Networks.
- Acquired both research and software development experience throughout all Bachelor's duration. Explored multiple research topics, including computational social science, misinformation, information retrieval, and AI Fairness. Developed software solutions alongside Brazilian governmental agencies.

WORK EXPERIENCE

Research Assistant: Information Retrieval
Data Commons Brazil (Google and UFMG)

📅 Sep 2023 – Present   ♦ Belo Horizonte, Brazil

- Project **funded by Google** to expand Data Commons to include Brazilian data. Data Commons is an initiative by Google to bridge the gap between publicly available data and its practical usability to address major challenges like climate change and health epidemics. Supervised by Fabrício Benevenuto, Ph.D..

Research Assistant: Natural Language Processing
Computer Science Department, UFMG

📅 Aug 2023 – Present   ♦ Belo Horizonte, Brazil

- Working on state-of-the-art Large Language Models for text-to-SQL and conversational search. **Funded by the Public Ministry of Minas Gerais**. Supervised by Professor Rodrygo L.T. Santos, Ph.D..

Summer@EPFL - Research Intern
Swiss Federal Institute of Technology in Lausanne (EPFL)

📅 Jul 2022 – Sep 2022   ♦ Lausanne, Switzerland

- Worked on developing a framework to audit online recommendation systems and conducting experiments with bots to account for personalization. Supervised by Prof. Robert West, Ph.D. and Manoel Horta Ribeiro

Head Teaching Assistant
Computer Science Department, UFMG

📅 Mar 2022 – Jul 2022   ♦ Belo Horizonte, Brazil

- Responsible for overseeing 80+ students' semester projects and weekly activities for the Introduction to Data Science course at UFMG. Supervised by Prof. Flávio Figueiredo, Ph.D.

Research Assistant: Information Retrieval
Computer Science Department, UFMG

📅 Feb 2021 – Jun 2023   ♦ Belo Horizonte, Brazil

- Worked on developing a robust platform that allows non-specialized users to implement powerful crawlers used to gather public data from Brazilian governmental agencies. **Funded by the Public Ministry of Minas Gerais**. Advisor: Professor Rodrygo L.T. Santos, Ph.D.

Research Assistant: Information Retrieval
Brazilian Institute of Geography and Statistics (IBGE) and UFMG

📅 Oct 2020 – Mar 2021   📍 Belo Horizonte, Brazil

- Developed an application to aid IBGE's analysts in their duties and automate tasks, such as calculating inflation based on products available online. **Funded by the Brazilian Institute of Geography and Statistics (IBGE)**. Advisor: Professor Rodrygo L.T. Santos, Ph.D.

Research Assistant: Social Media Monitoring and Misinformation
Computer Science Department, UFMG

📅 Jan 2020 – Jan 2021   📍 Belo Horizonte, Brazil

- Developed monitoring applications for social media (WhatsApp, Telegram, and Instagram), later used for multiple research projects. Also worked on sentiment analysis for Brazilian Portuguese. **Fellowship funded by the Public Ministry of Minas Gerais**. Advisor: Professor Fabrício Benevenuto, Ph.D.

Research Assistant: Political Analysis with Networks
Computer Science Department, UFMG

📅 Oct 2017 – Dec 2019   📍 Belo Horizonte, Brazil

- **Fellowship funded by the ATMOSPHERE project (joint initiative: European Commission and Brazilian Government)**
- Performed data analysis using complex networks, including state-of-the-art network backbone extraction techniques. Helped develop a method to analyze governance using voting session data from the US House of Representatives. Also worked on an international project with researchers from Politecnico di Torino regarding Instagram data monitoring before and after the Italian and Brazilian elections. Advisor: Professor Jussara M. Almeida, Ph.D.

PUBLICATIONS

- **Breno Matos**, Rennan C. Lima, Rodrygo Santos, Savvas Zannettou & Fabrício Benevenuto, **"Misinformation Span Detection on Videos via Audio Transcripts"** – **work in progress – will be submitted to ICWSM in May 2024**).
- **Breno Matos**, Rennan C. Lima, Jussara M. Almeida, Marcos A. Gonçalves, Rodrygo Santos, **"Intellectual Dark Web, Alt-lite and Alt-right: Are They Really That Different? A Multi-Perspective Analysis of the Textual Content Produced by Contrarians"** – accepted (to appear) at the Social Network Analysis and Mining Journal, Springer.
- **Breno Matos**, Rennan Lima, Jussara M. Almeida, Rodrygo L.T. Santos, & Marcos Gonçalves - **"On the Presence of Abusive Language in Mis/Disinformation"**, The 13th International Conference on Social Informatics. SocInfo '22
- Carlos Henrique Gomes Ferreira, Fabricio Murai Ferreira, **Breno Mato**s, and Jussara Marques de Almeida. – **"Modeling Dynamic Ideological Behavior in Political Networks"**. The Journal of Web Science 1 (2019)
- Carlos Henrique Gomes Ferreira, **Breno Matos** & Jussara M. Almeida - **"Analyzing Dynamic Ideological Communities in Congressional Voting Networks"**. Social Informatics: 10th International Conference, SocInfo 2018
- Daniel Kansaon, Michele A. Brandão, Julio C.S. Reis, Matheus Barbosa, **Breno Matos**, Fabrício Benevenuto - **"Mining Portuguese Comparative Sentences in Online Reviews"**. XXVI Brazilian Symposium on Multimedia and the Web (2020)
- **Breno Matos**, Fabrício Benevenuto, Ana P.C. Da Silva - "A Nudez como Estereótipo de Beleza através das Lentes do Instagram" – **english: [Nudity as a Beauty Stereotype through the Lens of Instagram]**. X Brazilian Workshop on Social Network Analysis and Mining, (2021)
- **Breno Matos**, Carlos H. G. Ferreira, Jussara M. Almeida - "Analisando a governabilidade presidencial a partir de padrões de homofilia na Câmara dos Deputados: Estudos de Casos no Brasil e nos EUA" – **english: [Analyzing presidential governability based on homophily patterns in the Chamber of Deputies: Case Studies in Brazil and the USA]**. In: 7th Brazilian Workshop on Social Network Analysis and Mining (BraSNAM), 2018

AWARDS AND RECOGNITIONS

Google Latin America Research Award
Research grant structured as an unrestricted gift - 8,500 USD/42,000 BRL

📅 Dec/2023   📍 Belo Horizonte

Best Short Paper Winner
X Brazilian Workshop on Social Network Analysis and Mining, BraSNAM

📅 2021   📍 Virtual Edition

Best Full Paper Nominee
Social Informatics: 10th International Conference

📅 2018   📍 Saint Petersburg

LANGUAGES

English   Portuguese   French (Beginner)