

# Allana Tavares Bastos (she/her)

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A first-year Brazilian doctoral candidate in Computer Science, passionate about Network Science, Complex Systems and Artificial Intelligence. Member of Future Lab and LAPO (Laboratory of Operational Research). Deeply interested in urban mobility, sustainability, social good, and the protection of human and animal rights.

## Education

<b>PhD in Computer Science</b> <i>Federal University of Minas Gerais (UFMG)</i> Advisor: Professor Martín G. Ravetti Recipient of CAPES PhD Scholarship (2025 - 2029)	<b>03/2025 - 03/2029</b>
<b>MsC in Computer Science</b> <i>Federal University of Minas Gerais (UFMG)</i> Advisor: Professor Martín G. Ravetti Recipient of CAPES Masters Scholarship (2022 - 2024) Dissertation: Diversity-Aware Graphormer: Insights from Hate Speech Detection on 4chan	<b>08/2022 - 12/2024</b> GPA: 4.6/5.0
<b>Graduate Diploma in Systems Analysis and Development</b> <i>Pontifical Catholic University of Minas Gerais (PUC Minas)</i> Awarded Best Project of a Mobile App in class (12/2022)	<b>06/2021 - 12/2023</b> GPA: 4.9/5.0
<b>Bachelor of Science in Business Administration</b> <i>Federal University of Minas Gerais (UFMG)</i> Final paper: Robustness of the public transport network of Belo Horizonte, advised by Professor Tiago A. Schieber	<b>06/2017 - 09/2021</b> GPA: 4.6/5.0

## Skills

**Programming:** Python, R, SQL, Html, CSS and JavaScript, Git, C++, Kubernetes

**Languages:** Portuguese (fluent), English (fluent), Spanish (intermediary), and French (elementary)

## Work Experience

<b>Research Staff Member and Developer</b> <i>Future Lab</i> <ul style="list-style-type: none"><li>Elicited requirements and developed the backend and API of Flautim, a cloud machine learning platform for Federated Learning</li><li>Tested the platform with federated and unfederated machine learning projects</li></ul>	<b>04/2023 - current</b>
<b>Data Science Internship</b> <i>RaiaDrogasil (RD)</i> <ul style="list-style-type: none"><li>Developed an implicit recommendation system for product pages, based on product's category</li><li>Optimized NLP-based categorization of products' ratings and comments from 60% to 85% accuracy, providing better insights for the customers relations teams and raising internal performance indicators</li><li>Tech Stack: Python   Kedro   SQL   AWS   GitLab</li></ul>	<b>04/2022 - 08/2022</b>
<b>Special Projects Internship</b> <i>Municipality of Belo Horizonte</i> <ul style="list-style-type: none"><li>Cleaned up personnel information in proprietary software, and emitted, checked and altered data in SQL reports</li></ul>	<b>09/2019 - 07/2021</b>

## Research Experience

<b>Research Fellowship</b> <i>Administrative Sciences Department - UFMG   Advisor: Professor Tiago A. Schieber</i> <ul style="list-style-type: none"><li>Developed a research in Network Science on the detection of anomalies in bidding processes, constructing a measure to check abnormal interactions in the networks, using R</li></ul>	<b>03/2020 - 08/2021</b>
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- Took part in a research group on modeling the pandemic with 91% accuracy, using Artificial Intelligence, Machine Learning techniques and Network Science concepts

### Research Fellowship

08/2017 - 08/2019

*PET Administration - UFMG | Advisor: Professor Deise L. Ferraz*

- Collaborated in a self-organized group with demands in research and extension, including the planning and execution of workshops, talks, radio programs and qualitative research
- Was the editor in chief of a student academic magazine, *Multifaces*, from 01/2018 to 08/2019, leading an editorial team with 7 peers in the publishing process of 2 editions

### Junior Research Fellowship

07/2015 - 12/2016

*CEFET-MG | Advisor: Christiano Rocha, MsC*

- Research in enumerability and infinity, which resulted in a presentation in a local conference organized by CEFET-MG

## Publications

[Google Scholar profile](#)

Christiano O Sena, **Allana Tavares Bastos**, **Enumerability and Infinity**, *12ª Semana de Ciência e Tecnologia do CEFET-MG*, September 01, 2016.

Pedro HSS Barros, Marcelo QA Oliveira, Omid Orang, Felipe AR da Silva, Fabricio J Erazo-Costa, **Allana Tavares Bastos**, Petrônio CL Silva, Glauber Soares dos Santos, Antonio AF Loureiro, Martín Gómez Ravetti, Marcelo Azevedo Costa, Frederico Gadelha Guimarães, Heitor S Ramos, **Flautim: A Federated Learning Platform using K8S and Flower**, *30º Simpósio Brasileiro de Sistemas Multimídia e Web (WebMedia)*, SBC, pp. 87-90, October 14, 2024. [https://doi.org/10.5753/webmedia\\_estendido.2024.244009](https://doi.org/10.5753/webmedia_estendido.2024.244009)

**Allana Tavares Bastos**, Martín Gómez Ravetti, **Diversity-Aware Graphormer: Insights from Hate Speech Detection on 4chan**. *2025 IEEE International Conference on Communications (ICC): SAC Social Networking Track*.