

# JOÃO PEDRO BAZZO

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C.V. last updated in July 2025

## EDUCATION

Ph.D. in Civil & Mineral Engineering 2023 - 2027 (expected)

University of Toronto

Supervisor: Prof. Marianne Hatzopoulou

M.Sc. in Environmental Engineering 2020

Federal University of Parana

Title: "Spatiotemporal vehicle emissions inventory model: A case study in Curitiba-PR" [Link] [In portuguese]

Supervisor: Prof. Marcelo Risso Errera

B.Sc. in Environmental Engineering 2016

Federal University of Parana

Exchange Program in Environmental Engineering 2014

University of Waterloo

Science Without Borders Fellowship

## EXPERIENCE

Research Assistant

University of Toronto | Department of Civil & Mineral Engineering

Sept. 2023 – Current

Toronto, Canada

- Research focuses on ride-hailing, vehicle emissions, and electrification.
- Teaching Assistant activities.
- Administrative Officer for the Institute of Transportation Engineers Student Chapter (UT-ITE) during 2024-2025.

Research Assistant

Institute for Applied Economic Research (IPEA)

Sept 2019 – June 2023 (3 yrs 10 mos)

Brasília, Brazil

- Research on urban mobility trends, active transportation use, racial and income inequalities in health access, spatial distribution of public services, and sustainable urban form in Brazilian cities.
- Co-authored five working reports, four peer-reviewed articles, and developed two R packages: (1) **gtfs2gps**, for processing GTFS data with high spatiotemporal resolution; and (2) **gtfs2emis**, for estimating emissions from public transportation systems.
- Member of the **Access to Opportunity** project, focused on calculating people's access to jobs, healthcare, and education services by different transport modes in Brazil's largest cities.

Research Coordinator (Volunteering)

Cicloiguaçu Cyclist Association

Jun 2016 – Jun 2019 (3 yrs 1 mo)

Curitiba, Brazil

- NGO focused on increasing and improving bicycle use as a mode of transportation in Curitiba, with a strong emphasis on research and community participation;
- Contributed to vehicle count projects, organized seminars on bicycles and urban mobility, and conducted spatial data analysis on cyclist injuries and fatalities in collaboration with local universities;
- Coordinated the 2017 Curitiba Cycling Profile Survey, which evaluated the socioeconomic characteristics and preferences of 1,500 cyclists;

- Led outreach efforts with local universities, public authorities, and the media, raising awareness about cycling in the urban environment.

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## Intern

### Envex Consulting

📅 Feb 2015 – Mai 2016 (1 yrs 4 mo)

📍 Curitiba, Brazil

- Participated in air quality, noise pollution, hydrology, and environmental impact assessment projects
- Developed R scripts to process and visualize data on air quality and noise monitoring projects

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## Research intern

### University of Waterloo | Climatology Lab

📅 Set – Dec 2014 (4 mos)

📍 Waterloo, Canada

- Research in a project entitled "The study of the relationship between ocean temperature and jet streams displacement in scenarios of climate change", with the supervision of Prof. Christopher Fletcher;
- Conducted literature review and data analysis using R and Linux (Bash Shell).

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## Intern

### Public Prosecutors Office

📅 Nov 2011 – Ago 2013 (1 yrs 10 mo)

📍 Curitiba, Brazil

- Assisted with processes related to municipal solid waste management, atmospheric emissions, environmental licensing, and water resources.
- Co-authored a report on composting and municipal solid waste management.
- Conducted technical analysis on Environmental Impact Studies.
- Inspected industrial and environmentally damaged areas.

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## Junior Enterprise (Volunteering)

### Ciclus Consulting – Federal University of Parana

📅 Mar 2010 – Mar 2013 (2 yrs 11 mo)

📍 Curitiba, Brazil

- Worked in a greenhouse gas inventory project; received entrepreneurship and project management training.
- Supervised project consultants to ensure i) adherence to project deadlines and budget, and ii) proper application of project management methodology.

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# PUBLICATIONS

## Articles

- **Bazzo, J. P.**, Saleh, M., Hatzopoulou, M. (2025). Greenhouse Gas Emissions Trends and Fleet Renewal of Ride-Hailing in Toronto, Canada. *Journal of Cleaner Production*. [\[Link\]](#)
- Tomasiello, D. B., **Bazzo, J. P.**, Parga, J. P. F. A., Servo, L. M. S., Pereira, R. H. M. (2023). Racial and income inequalities in access to health in Brazilian cities. *Journal of Transport and Health*. [\[Link\]](#)
- **Bazzo, J. P.**, Pereira, R. H. M., Andrade, P. R. (2023). Estimating public transport emissions from General Transit Feed Specification data. *Journal of Transportation Research Part D: Transport and Environment*. [\[Link\]](#)
- **Bazzo, J. P.**, Vieira Braga, C. K., Pereira, R. H. M. (2022). The impact of COVID-19 on air passenger demand and CO2 emissions in Brazil. *Journal of Energy Policy*, 164, 112906. [\[Link\]](#)
- Pereira, R. H. M., Andrade, P. R., **Bazzo, J. P.** (2022). Exploring the time geography of public transport networks with the gtfs2gps package. *Journal of Geographical Systems*. [\[Link\]](#)

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## Working papers and reports

- Pereira, R. H. M., **Bazzo, J.P.** (2024). Trends and Inequalities of Urban Mobility in Brazil III: The Use of Active Mobility. Working Paper 3024. Ipea - Institute for Applied Economic Research. [\[Link\]](#)[\[In portuguese\]](#)
- Tomasiello, D.B., **Bazzo, J.P.**, Parga, J.P., Servo, L.M, Pereira, R. H. M. (2023). Racial and income inequalities in access to health in Brazilian cities. Working Paper 2832. Ipea - Institute for Applied Economic Research. [\[Link\]](#)[\[In portuguese\]](#)
- Pereira, R. H. M., Herszenhut, D., Braga, C. K. V., **Vieira, J.P.**, Oliveira, J. L. A. O., Parga, J.P., Saraiva, M., Silva, L.P., Tomasiello, D.B., Warwar, L. (2022) Spatial distribution of sociodemographic characteristics and public services in the 20th major cities of Brazil. Working Paper 2772. Ipea - Institute for Applied Economic Research. [\[Link\]](#)[\[In portuguese\]](#)

- Pereira, R. H. M., Parga, J. P., Saraiva, M., **Bazzo, J. P.**, Tomasiello, D., Silva, L. P., Nadalin, V. G., Barbosa, R. J. (2022). TD 2802: Urban form and sustainable mobility: evidences from Brazilian cities. [[Link](#)][*In portuguese*]
- Pereira H.M.R., Warwar L., Parga J., **Bazzo J.P.**, Braga C.K., Herszenhut D. and Saraiva M. (2021). TD 2673: Trends and inequalities of urban mobility in Brazil I: the use of public and individual transport. [[Link](#)][*In portuguese*]
- Miranda, A.C. and **Bazzo J.P.** (2020).The use of bicycles in the context of urban mobility. p.335 In: Urban mobility: a multidisciplinary approach. Ed. by Cristina Araújo Lima. Curitiba: UFPR. ISBN: 978-65-86233-02-5 [*In portuguese*]
- Belloto, J.C. A., Nakamori, S. and **Bazzo, J.P.**(2020). Public institutions and traffic sources: practices to encourage sustainable mobility at UFPR and CELEPAR. In: Brazilian public management: inovation and network sustainability. Ed. by Villac, T. v. 1, p. 203-221 [*In portuguese*]
- Moreira, H.J.; **Bazzo, J.P.**; Dittert, L.F.; Miranda, A.C.M.; Reck,Y.B. (2020). Temporary infrastructure for active mobility: Cycle mobility solutions to adapt the streets in the fight against the pandemic. UCB & Cicloiguaçu. Curitiba. [[Link](#)][*In portuguese*]

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## Congress Presentations

- **Bazzo, J. P.**, Saleh, M., Hatzopoulou, M. (2025). Longitudinal Analysis of Trends in Greenhouse Gas Emissions and Fleet Renewal for Transportation Network Companies in Toronto, Canada. *Transportation Research Board*. [[Link](#)]
- **Bazzo, J. P.**, Errera, M. R., Daemme, L. C. (2019). Air Pollutants Modeling using Bottom-up Vehicular Emissions Inventory. [[Link](#)]
- **Bazzo, J. P.**, Almeida, R. (2016, October 22). Flow regionalization using Neural Artificial Networks RBF. Zenodo. <https://doi.org/10.5281/zenodo.7314385> [[Link](#)] [*In portuguese*]
- Gasparovic, C. L. M.; Ostroski, A.; **Bazzo, J. P.**; Errera, M. R. . Elementary Constructal Design of a carbon capture systems based on carbonation over fly ashes.. In: Constructal Law Second Law Conference 2019 CLC 2019, 2019, Porto Alegre. Proceedings of Constructal Law Second Law Conference - CLC - 2019. Porto Alegre: Unisinos Porto (Brazil), 2019. v. 1. p. 184-187

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## R packages

- **Bazzo, J.P.**; Pereira, R.H.M.;Andrade, P.R.(2022) gtfs2emis: Generating estimates of public transport emissions from GTFS data. GitHub [[Link](#)]. [*Autor, Mantainer*]
- Espinosa, S.I.; **Bazzo, J.P.** (2021). vein: Vehicular Emissions Inventories. Version 0.9.4. [[Link](#)]. [*Contributor*]
- Pereira, R.H.M.; Andrade, P.R.; **Bazzo, J.P.** (2019) gtfs2gps: Converting GTFS data to GPS format. Zenodo[[Link](#)]. [*Autor*]
- Herszenhut, D.; Pereira, R. H. M., Andrade, P. R., **Bazzo, J.P.** (2022, May). gtfstools: General Transit Feed Specification (GTFS) Editing and Analysing Tools (Version v1.1.0). Zenodo. [[Link](#)]. [*Autor*]

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## AWARDS & GRANTS

- 2024 – Sustainable Development Goals at University of Toronto Graduate Student Award [[Link](#)]
- 2024 – Richard Soberman Graduate Student Fellowships
- 2023 – Dr. Mazen Hassounah Graduate Scholarship in Mass Events Transportation and Crowd Management
- 2023 – Highly Commended at the International Geospatial Innovation Awards – **gtfs2emis** project [[Link](#)]
- 2022 – Finalist at the International Transport Forum (ITF/OCDE) Decarbonising Transport Award – **gtfs2emis** project [[Link](#)]
- 2021 – Master's dissertation award by Federal University of Paraná – "Enjoy Science UFPR" Award
- 2017-2019 – CAPES Studentship for Master Degree at Federal University of Parana (UFPR)
- 2013-2014 – Science Without Border scholarship for an exchange program at the University of Waterloo (Canada)