Luiz Guilherme Kasputis Zanini

Brazilian and Lithuanian Citizen

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Education

École de Technologie Supérieure (ÉTS)
Montreal, QC, Canada
Ph.D. in Engineering, specializing in Multimodal Machine Learning *Sep. 2024 – Ongoing*
- Focus on affective computing applications, including video, physiological signals, and other modalities.

University of São Paulo
São Paulo, SP, Brazil
M.Sc. in Electrical and Computer Engineering *Feb. 2022 – Jul. 2024*
- **Thesis:** Segmentation and Classification of Dental Caries in Computer Tomography.
- **Fellowship:** *Programa de Bolsas Itaú* (PBI).
- **Coursework:** Artificial Intelligence, Machine Learning, Computer Vision, Data Science, Virtual Reality.

University of São Paulo
São Paulo, SP, Brazil
B.Sc. in Computer Engineering *Mar. 2018 – Dec. 2022*
- **Coursework:** Software Quality, AI & Machine Learning, High-Performance Computing.
- **Award:** Best Final Paper of the Computer Engineering Poli - USP 2022.

Experience

C2D - Machine Learning Researcher
São Paulo, SP, Brazil
Full-time Researcher in Computer Vision for Healthcare Applications *Jan. 2022 – Aug. 2024*
- Conducted research on computer vision for healthcare, funded by the *Itaú PBI scholarship program.*
- Published 5+ papers as first author, focusing on deep learning, self-supervised learning, and image processing.
- Developed machine learning pipelines for medical image segmentation and classification with improved accuracy.

Ada Tech
São Paulo, SP, Brazil
Data Science Junior *Sep. 2021 – Jan. 2022*
- Built data pipelines with AWS services (Lambda, SQS, S3) to automate data ingestion processes.
- Developed predictive models in collaboration with the marketing team, increasing lead conversion rates by up to 10%.
- Created dashboards in Amazon QuickSight to support data-driven decisions.

Stefanini Scala
São Paulo, SP, Brazil
Data Science Intern *Aug. 2021 – May. 2021*
- Developed optimization solutions using genetic algorithms and Mixed-Integer Linear Programming.
- Utilized Apache Spark for distributed data processing, improving performance on large-scale datasets.

Taqtile
São Paulo, SP, Brazil
Software Development Intern *May. 2020 – Dec. 2020*
- Developed mobile applications with React Native and Apollo GraphQL, optimizing performance.
- Collaborated in an agile team, ensuring on-time delivery and code quality through peer reviews.

Selected Publications

Enhancing Dental Caries Classification by using Image Processing and Self-Supervised Learning
Luiz Zanini, Fátima Nunes, and Izabel Rubira-Bullen - Journal Computers in Biology and Medicine, 2024.

Segmentation and Classification in Computer Tomography using Machine Learning and Image Processing
Luiz Zanini, Fátima Nunes, and Izabel Rubira-Bullen - HEALTHINF 2024, Rome, Italy.

Convolutional architectures with LSTM and TCN: exploring dependency between data
Luiz Zanini, Aldomar Silva, Felipe Almeida, Fátima Nunes, and Anna Costa - ENIAC 2022, Brazil.
- **Award:** Second place for best paper in the undergraduate category.

Skills & Other

Technologies: Machine Learning, Deep Learning (PyTorch), OpenCV, AWS, MySQL, Git, Bash, Unix.
Programming Languages: JavaScript, Python, C, C++, LaTeX.
Reviewer: NeurIPS 2024 (LXAI), Journal of Information Fusion.
Certifications: [AWS Certified Cloud Practitioner](https://aws.amazon.com) (Jun 2022), [AI for Medicine](https://coursera.org) (Feb 2022), [Deep Learning Specialization](https://coursera.org) (Jun 2021).
Languages: Portuguese (Native), English (C1).