

# LUIZ GUILHERME KASPUTIS ZANINI

Brazilian and Lithuanian Citizen

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## Education

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### 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

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### C2D - Machine Learning Researcher

São Paulo, SP, Brazil

*Full-time Researcher in Computer Vision for Healthcare Applications*

*Jan. 2022 – Aug. 2024*

- Published 5+ first-author papers on deep learning in collaboration with multidisciplinary teams.
- Developed an automated pipeline for processing, prediction, and 3D visualization in healthcare applications.
- Developed machine learning pipelines, achieving a 7% accuracy improvement over traditional methods.

### Ada Tech

São Paulo, SP, Brazil

*Data Scientist Junior*

*Sep. 2021 – Jan. 2022*

- Built ETL pipelines with AWS services (Lambda, SQS, S3) to automate data ingestion and transformation 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 Scientist Intern*

*Aug. 2021 – May. 2021*

- Developed optimization solutions with genetic algorithms, reducing costs by 15% and maintaining product quality.
- 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, reducing app load times.
- Collaborated in an agile team, ensuring code quality through peer reviews.

## Selected Publications

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### 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

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**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](#) (Jun 2022), [AI for Medicine](#) (Feb 2022), [Deep Learning Specialization](#) (Jun 2021).

**Languages:** Portuguese (Native), English (C1).