Leonardo Kuffó

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PhD student at CWI Database Architectures group, doing research on Data Compression and Vector Databases. Passionate about Databases and Software Engineering. I like to make systems go fast!
LANGUAGES: Spanish (Native Proficiency) | **English** (Professional working proficiency)

SKILLS

- Experience using a variety of Database Systems in production (MySQL, Redshift, MongoDB, Redis, Kafka)
- Fluent in C++ and Python
- Expert in Data Analysis and Data Visualization with Python (Pandas, Matplotlib, Seaborn, Plotly)
- Experience using AWS (S3, EC2, Lambda, Cloudwatch, Step-Functions, AWS CDK)
- Experience on Database Systems Programming (DuckDB: C/C++)
- Advanced SQL Scripting and Query Optimization
- Vast experience on Web Development (Node.js, React & Redux)
- UNIX, CI/CD, Docker, SCRUM, Git, LaTeX

SCIENTIFIC PUBLICATIONS

- **ALP: Adaptive Lossless floating-Point Compression**. Proceedings of the ACM on Management of Data (2023). Available Online. Peer-reviewed.

- **Know your customer: Detection of Customer Experience (CX) in Social Platforms using Text Categorization.** In 2018 IEEE International Conference on Big Data (Big Data). Available Online. *Peer-reviewed.*

- **Mining Worldwide Entrepreneurs Psycholinguistic Dimensions from Twitter.** In 2018 International Conference on eDemocracy & eGovernment (ICEDEG). Available Online. *Peer-reviewed.*

- **Back to# 6d: Predicting Venezuelan states political election results through Twitter**. In 2017 Fourth International Conference on eDemocracy & eGovernment (ICEDEG). Available Online. *Peer-reviewed.*

* Attended conference as a speaker   Google Scholar Profile

EXPERIENCE

CWI (Centrum Wiskunde & Informatica)
Database Systems Researcher
                                                                    January 2023 - Present
                                                                    Amsterdam|Netherlands

- PhD. student under the supervision of Prof. Peter Boncz.
- **Created a new state-of-the-art algorithm** for floating point data compression called ALP. Currently being used inside **DuckDB**.
- Currently doing research on Data Compression and Vector Databases.

Amazon EU
Data Engineer Intern
                                                                    June 2022 - November 2022
                                                                    Luxembourg|Luxembourg

- **Engineered** an architecture in AWS Lambda with Python to centralize the monitoring of dozens of database cluster's specialised metrics.
- Added functionalities into **ETL pipelines** running in Amazon EMR using Spark (Scala) and Amazon internal Data Lake.

Shippify Inc.
Back-End Engineer (2 years) | Lead Software Engineer (1 year)
                                                                    October 2018 - October 2021
                                                                    Guayaquil|Ecuador

- **Software Development**: Lead the development of the Shippify's Logistics Actions Automation System to automate the management of vehicles fleets and processing of millions of deliveries.
- **Scaling systems**: Engineered Shippify's Vehicles Routing engine infrastructure to support the concurrent creation of thousands of vehicles routes. Further implemented functionalities on Shippify's Vehicles Routing Back-end.
- **Data Modelling**: Performed data modelling in Shippify's relational schemas to support new functionalities and stakeholders requirements.

CERN (European Organization for Nuclear Research)
Data Research Intern

July 2018 - September 2018
Geneva|Switzerland

- Engineered a prototype in Java to measure computer core metrics similarities against benchmarks at workflows execution time using **multivariate time-series classification techniques**. Part of **CERN Openlab** 2018.

InterMine (Cambridge Systems Biology Centre)
Web Developer Intern

May 2017 - August 2017
Cambridge|England

- Developed an open-source Web Application for the **InterMine Registry** project at the *Cambridge Systems Biology Centre (University of Cambridge).* Part of **Google Summer of Code** 2017. *(Remote internship)*
- The project helped the *Biology Centre* to keep their different data warehouses metadata updated. Open-source project available online.

EDUCATION

- [2023-Present] **PhD. Student** at CWI Database Architectures Group.
- [2021-2023] **M.Sc. in Computer Science** (Big Data Engineering Specialization): Vrije Universiteit Amsterdam & University of Amsterdam (Amsterdam, NL)
- [2014-2019] **B.Sc. in Computer Science** (Data Science Specialization): Escuela Superior Politécnica del Litoral (Guayaquil, EC)

VOLUNTEERINGS

- [2023] **CIDR'23**: Volunteering helping in logistics and organization.
- [2015-2019] **Research Group TAWS**: Research activities under the supervision of Prof. Carmen Vaca. Volunteered in Social Good activities.

BEYOND MY EXPERIENCE

- Since 2020 I am an Udemy Professor with well over 10K students. I teach Web Scraping and Data Visualization!
- I am a Computer Science professor on Youtube with over 1.5M views!
- I make wonderful music that I upload to Spotify :)
- I am a coffee hobbyist ☕