Alberto Domínguez Horner

Data Engineering and Causal Reasoning

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Data Engineer with a strong background on Causal AI. I administer a private repository for data ingestion and data management with Spark in Microsoft Fabric. I am certified as Microsoft Fabric Data Engineer and as Microsoft Fabric Analytics Engineer. For many projects, I have designed the Cloud Data Architecture. I contribute biweekly to the causalpython.io newsletter.

Industry Experience

● *Ventagium Data Consulting* - **Data Engineer**   *2023 - present*
  - DevOps Engineer: manage CI/CD.
  - Data management and data extraction private python projects.
  - Responsible for ETLs, and its associated cloud resources.
  - Develop Causal Analysis to deliver valuable insights to our clients.
  - Work with Azure (Azure SQL Databases, Storage Accounts or Data Lakes, Virtual Machines, Virtual Networks, Function Apps, etc.)
  - Work with Microsoft Fabric: Orchestrate entire solutions on Spark.
  - Work with Microsoft Power Platform: develop Power Apps, Power Pages, and Power Automate flows.

Education

● **Universidad Nacional Autónoma de México (UNAM)** - **Master in Philosophy of Science**
  - Thesis: "Machines that think on causes" (Máquinas que piensan causas)
  - Advisor: Dr. Francisco Hernández Quiroz (Faculty of Computer Science)   *2021 - 2023*
  - GPA: 10 on a scale of 10. Best graded in my generation.
  - Graduated with honors in June, 2024. Attended from 2021 to 2023.

● **Universidad Panamericana** - **Bachelor in Philosophy**
                                                                                          2015 - 2019
  - Graduated with honors in 2021. Attended from 2015 to 2019.
  - GPA: 9.6 on a scale of 10. Second best graded in my generation

Certifications

- (2024) DP-600 Microsoft Fabric Analytics Engineer Associate
- (2024) DP-700 Microsoft Fabric Data Engineer Associate
- (2023) AZ-900 Microsoft Azure Fundamentals Certification
- (2022) Machine Learning *Standford University* Online Certified Course by Andrew Ng

Languages

- Spanish (native)
- English (full proficiency)
- German (limited working proficiency)

Programming Languages

- Python (and pySpark)
- SQL
- HTML, CSS and Javascript
- MATLAB

Awards

- (2018) Second place at the XV International Logic Contest within the Masters category, organized by the Mexican Academy of Logic (AML)
- (2018) First Place at the *Foro Universitas* essay contest, organized by the Universidad Panamericana. The essay I presented is titled "The Common Horizon".
- (2017) First place at the XIV International Logic Contest within the Undergraduate category, organized by the Mexican Academy of Logic (AML)

Skills

- Causal Inference
- Data Analysis
- Data Governance
- Data Management
- Security Best Practices
- DevOps

Tools

- Microsoft Fabric
- Apache Spark
- SQL Databases
- Near-Real-Time Intelligence
- Data Lakes
- Power Platform
- Power BI

Research Experience

Research Group on History of Philosophy and Mathematics (UNAM) *2023-Present*

- Led by Dr. Carmen Martínez Adame. Most members are professors at the Faculty of Sciences of the Universidad Nacional Autónoma de México (UNAM).

Research Group on Causal Inference and Causal Discovery (INAOE) *2023-Present*

- Led by Dr. Enrique Sucar and Dr. Julio César Muñoz, both are researchers at the National Institute of Astrophysics, Optics and Electronics.

CONAHCYT Research Scholarship at Universidad Nacional Autónoma de México *2021-2023*

- Causal Inference research.
- Presented my research to the computer science community in the workshop CaDis 2023, at the INAOE (National Institute of Astrophysics, Optics, and Electronics).

Technology, Environment and the Pursuit of Wisdom (Duke University) *2023*

- Dr. Peter Casarella and Sr. Damien Marie Savino, Ph.D. led this one-week seminar at Duke University. The seminar was organized by the *Lumen Christi Institute*, and we addressed topics on the meaning of science and engineering particularly regarding environmental sustainability.

Research seminar on Logic, Epistemology and Ethics of AI *2020- 2022*

- Led by Dr. Karen González Fernández, and organized at the Universidad Panamericana. It is an international and interdisciplinary seminar. I participated in the organization of the seminar.

Publications

- "Book Review: *Privacy is Power* by Carissa Véliz", Tópicos, No. 66 (2023), May-August. https://doi.org/10.21555/top.v660.2656
- "Should Causal AI Rule Over Deep Learning?", *Workshop on Causal Discovery CaDis 2023*, Mexican Academy of Computing (AMEXCOMP). December 12th, 2023. ISBN 978-607-98941-8-4.

Teaching Experience

Universidad Panamericana - Ethics Subject Teacher *2022 - 2023*

Prepa UP - High School Ethics, Logic, and History of Art Subject Teacher *2019- 2021*

Civic Engangement

- (2020 - 2024) Cofounder and Editor of *Revista Spes, a* magazine focused on reflexive thinking, public life and civic journalism.
- (2018) A month of social service at Itiatio, Guerrero, México.
- (2014 - 2015) A year of service at Sta. María Quiegolani, Oaxaca, México.