## Diego Vallarino

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Uruguayan Citizenship, US EB1A green card, Spain PEC visa.

#### **SUMMARY**

With over 20 years of experience in the financial services and business information industries, I am a Global Principal Data Scientist at Coface, a leading credit insurance and risk management company. My mission is to research and assess new valuable data and apply back-testing, simulation, and statistical techniques to improve the company's products and services. I also have a PhD in Cliometrics, a field of study that applies data science and econometrics to historical data and questions.

As a data science and quantitative research leader, I have a proven track record in economic research, finance models, economic forecasting, credit risk management, market risk management, model development, model review, model implementation, and data science. I have been recognized as a "Global Top 100 Data Visionary" by Truata in 2020 and received the Global One Equifax Award in 2018.

#### **EDUCATION**

PhD in Cliometrics – Torcuato Di Tella University – (Argentina – 2016-2018)

PhD dissertation "Tax benefits as a determinant for corporate investments' decision: the case of Uruguay 1970-2010"

MSc (bio)Statistics – Barcelona University – (Spain – 2020-2022)

Thesis: "Multi-Task Lineal Regression Learning for Survival Analysis: from traditional to machine learning models". Some of the courses in survival machine learning were taken as a PhD student at BarcelonaTech/UPC.

MSc in Data Management & Big Data – Barcelona University – (Spain – 2015) MBA Full Time – Adolfo Ibáñez Business School – (Chile – 2002-2003) BSc in Business & CPA – FCEA – Republic University – (Uruguay – 1994-2000)

Post Academic Degrees (Executive Education courses are not considered)

- SEE, Babson College, (USA, 2007)
- GCP, The Wharton School, (USA, 2003)
- MOC, Microeconomics of Competitiveness, Harvard Business School, (USA, 2010)
- Data Science Ethics, University of Michigan. (USA, 2018)

### AWARDS / HONORS

- 1. EB1A Green Card US 2023 (that only 1.65% of the world accesses)
- 2. "Global Top 100 Data Visionary" (2020) by <u>Truata</u> (MaterCard and IBM).
- 3. "Global One Equifax" Award in 2018.

### RESEARCH PAPERS

- 1. Vallarino, D. (forthcoming, 2024) "Temporal Dynamics of Countries' Journey to Cluster-Specific GDP per Capita: A Comprehensive Survival Study" *Review of Economic Assessment*
- 1. Vallarino, D. (2024). "A Comparative Machine Learning Survival Models Analysis for Predicting Bank Failure in the US (2001-2023)". *Journal of Economic Analysis*. 3(1), 129-144
- 2. Vallarino, D. (2024). "Machine Learning Algorithms for Survival Analysis: Advantages, Disadvantages, and examples". *International Journal of Artificial Intelligence and Machine Learning*.
- 3. Vallarino, D. (2023). "Predicting Machine Learning Survival Models comparison: the case of startups time to failed with collinearity-related issues". *Journal of Economics Statistics*. 1(3), 1-15.

- 4. Vallarino, D. (2023). "When should they buy? Surviving machine learning models for purchase timing". <u>International Journal of Data Mining & Knowledge Management Process</u> vol 13, no 4/5
- 5. Navarro, D. V. (2007). "El comportamiento innovador como fuente del cambio: el ejemplo en las empresas de servicios". *Revista da FAE*, 10(1).
- 6. Vallarino, D. (2005). "Enterprise Innovation Model: cómo las empresas de Latinoamérica enfrentan la nueva competencia". *Revista de Antiguos Alumnos del IEEM*, 8(2), 100-108.

#### **BOOKS**

- 1. Vallarino, D. (2023). Machine Learning Survival Models for Economics Analysis: Inventory, Evaluation Metrics, and Empirical Analysis. Eliva Press
- 2. Vallarino, D. (2005). Innovando desde el sur. Cómo las empresas de América Latina enfrentan la nueva competencia, Ediciones La Gotera.

# CONFERENCE PROCEEDINGS

- 1. Vallarino, D. (2023). "Buy when? Survival machine learning model comparison for purchase timing." 4th International Conference on Big Data, Machine Learning and IoT (BMLI 2023) Dubai, UAE.
- 2. Vallarino, D., Azúa C, Úbeda, R. (2023). "Differentiated Roles and Perceptions of the Controller Function: An Exploratory Study". <u>Business Association of Latin America Studies (BALAS) Annual Conference</u>, Mexico City, Mexico.
- 3. Vallarino, D. (2023). "Comparative Analysis of Machine Learning Models for Survival Analysis: Empirical Study and Performance Assessment". *LatinR* 2023 *Conference*, Montevideo, Uruguay
- 4. Vallarino, D. (Aug. 2011). "The Promotion of Innovation in the Second Half of the 20th Century in Uruguay". Fourth Congress of History of Industry and Services, University of Buenos Aires, Argentina.
- 5. Vallarino, D. (Set. 2011). "40 years of Industrial Promotion Policy: the case of companies that were born being of national interest". First Chilean Congress of Economic History, Andrés Bello University, Viña del Mar, Chile.
- 6. Vallarino, D. (Dec. 2010). "The Promotion of Entrepreneurship in the second stage of outward growth in Uruguay (1974-2009) characterization of the companies that were born under the industrial promotion law and the investment promotion law". Summer School (Southern Hemisphere) of Economic History, Montevideo, Uruguay.
- 7. Vallarino, D. (February 2010). "Incentives for the creation of companies in the second stage of outward growth in Uruguay (1974-2009): the case of Bodega Carrau". Second Congress of Economic History, UNAM, Mexico
- 8. Vallarino, D. (September 2009). "Approach to the evolution in the creation and death of companies in Uruguay (1985-2000): the case of the land cargo transportation sector". Second Congress of History of Industry and Services, University of Buenos Aires, Argentina.

### WORKING PAPERS

- 1. Vallarino, D. (2023) "An historical perspective of Structural Economic Changes evidence from the Industrial and Investment Promotion in Uruguay (1974-2010)" *Available at SSRN*
- 2. Vallarino, D. (2023) "Incentives for Private Industrial Investment in historical perspective: the case of industrial promotion and investment promotion in Uruguay" (1974-2010) *Available at SSRN*
- 3. Vallarino, D (2023). "A relevant Weakness in Survival Machine Learning Models: non-Ergodicity". *Working Paper*

# WORKING IN PROGRESS

- 2. "Analyzing the Trajectory of Economic Convergence among Latin American Nations: A Survival Analysis Approach to GDP per Capita Patterns"
- 3. "Unveiling the Temporal Layers of Economic Transformations: A Survival Analysis on Unemployment Trends in the Americas."

### OTHER PUBLICATION

- 1. *Porandu* weekly newsletter (here)
- 2. Medium blog (here)
- 3. Forbes Mexico (<u>here</u>) (2015-2019)

# TEACHING EXPERIENCE

I have been Visiting Professor (2003 – Present) in areas such as *Applied Data Science, Information Economics and Strategic Innovation*:

- MBA *UCU Business School* (Uruguay, 2020)
- MBA Latam Adolfo Ibáñez University (México, 2020)
- Full Tine MBA & E-MBA Adolfo Ibáñez University (Chile, 2020)
- Executive Education Adolfo Ibáñez University (USA, 2019)
- MBA IEEM *University of Montevideo* (Uruguay, 2019)
- MBA Bootcamp *Adolfo Ibáñez University* (Chile, 2019)
- MBA Economic Sciences School of the UdelaR (Uruguay, 2019)
- Postgraduate course in Information Systems at the *Economic Sciences School of the UdelaR* (Uruguay, 2016 2019)
- PAE Paraguay Trade Fair. Asunción, Paraguay (Paraguay, June 2012 to 2017)
- MBA American University (Paraguay, 2010-2011-2013)
- Master in Public Policy from the *American University* (Paraguay, 2011)
- MBA and Bachelor of Management from *ORT University* (Uruguay, 2006-08)
- PMD of ESADE Business School (ORT Uruguay/Argentina, 2007)
- MBA, MDES of IEEM, *University of Montevideo* (Uruguay 2004-2005)
- Postgraduate in PmL, *University of Montevideo* (Uruguay 2008)
- Universidad Adolfo Ibáñez (Chile, 2003) as assistant researcher to the Entrepreneurship Center.

### STUDENT ADVISING

- Director of the thesis "Maturity of organizations in reference to the adoption of Data Analytics: the case of the financial system in Uruguay" Romanelli, V.; to obtain the MBA degree from the FCEA of the UdelaR (2019)
- Member of the tribunal of the thesis "An employee's turnover for small and unbalanced data set" Pignataro, F.; for the MSc Data Science & Business Analytics degree. ESSEC Business School, Paris, France (2018)
- Member of the tribunal for the thesis "Financial inclusion through Data Analytics in the telecommunications era" Favaro, G.; for a Master's degree in Economics. FCE, UBA, Argentina (2018)
- Director of the thesis "Big Data and Analytics as a source of competitive advantage in the health sector in Uruguay" Montico, S.; Ilaria, A; to obtain the MBA degree from the FCEA of the UdelaR (2018)
- Member of the tribunal of the thesis "Impact of recent investment promotion policies in Uruguay" Gervaz, I.; Goda, H.; Traiman, N.; to obtain the Bachelor's degree in Economics, FCEA, UdelaR (2012)

### WORK EXPERIENCE

- Global Principal Data Scientist (Spain/France, 01/2021 Present) Coface Group
- Chief Data Scientist (01/2019 12/2020) Scotiabank Uruguay
- Data & Analytics Director (01/2017 01/2019) Equifax Inc Uruguay
- **VP Operations** (04/2016 12/2016) OverActive 100 million startup that was purchased in 2021 by Perficient LatAm
- **Senior International Consultant** (09/2005 to 03/2016) *Interamerican Development Bank, World Bank, and United Nation Development Programme.*

### **MEMBERSHIP**

- I serve as a *Board Member* for UTEC University in Perú since 2020.
- Full member of CDO LatAm since 2020 (Perú).
- Full member of LatinxInAI since 2022 (San Francisco, US).
- Member of The Economic History Society since 2021.
- Member of the South American Network of Applied Economics since 2009.

### **OTHERS**

- Languages for Machine Learning: Python, R
- Data Management: SQL, Oracle, Impala, Hive
- Visualization: Tableau, MS PowerBI (DAX basic), Spotfire
- Languages: Spanish (Native), English (Advanced), Portuguese

(Intermediate), French (Basic), Italian (Basic)

Last updated: February 2024