

Harvey Rosas, Ph.D.

AI Strategist



Highlights

- 20+ years of leading tech and research AI projects.
- 15+ years of creating and developing high performance teams.
- 15+ years of effective communication and public speaking.
- 5+ years on executive roles.

Education

PH.D.: **MATHEMATICS** - 2011
KAIST, DAEJEON, SOUTH KOREA

M.S.: **APPLIED MATHEMATICS** - 2006
KAIST, DAEJEON, SOUTH KOREA

B.S.: **MATHEMATICS** - 2001
UNIVERSIDAD NACIONAL, COLOMBIA

Certifications

AWS ML ENGINEER ASSOCIATE - 2024

AWS CLOUD PRACTITIONER - 2022

AWS DATA LAB PARTICPANT – 2022

U. VALPARAISO HIGHER EDUCATION – 2017

U. JAVIERANA CONFLICT RESOLUTION - 2001

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Summary

Results-driven leader and effective communicator with a strong foundation in Applied Mathematics and a proven track record of success in applying AI, NLP, and computational statistics to solve complex business challenges. Expertise in designing and implementing AI cloud-native solutions that drive innovation and efficiency across various enterprise functions.

Experience

CTO, Principal Data Scientist - 2019 to present
PREVSIS, CHILE & COLOMBIA.

- Manage the modelling, planning, and execution of all AI data driven solutions.
- Carry short and long-term custom comprehensive data strategies to reach company goals.
- Build an entire data science team (BI/DE/ML) fully integrated with cloud dev.

TENURED PROFESSOR - 2012 to 2021
UNIVERSIDAD DE VALPARAISO, CHILE

- Chaired doctorate and undergraduate programs in Statistics including both accreditation processes.
- Chaired undergraduate program on the school or natural sciences, leading several accreditation initiatives.
- Awarded with the Teaching Excellence Award.

ASSOCIATED RESEARCHER - 2009 to 2012
KAIST, SOUTH KOREA

- Educational Innovation in the KAIST Freshman Design Program. Laboratory for Innovative Design and Engineering Analysis, Prof. Mary K. Thompson.

DEVELOPER - 2006 to 2007

Honors

- Teaching Excellence Award. Universidad de Valparaíso. 2016.
- South Korea National Research Foundation (NRF) scholarship. 2006.
- Korean International Cooperation Agency South America advance science program fellowship. 2004.

Skills

AI: Statistical methods of machine learning.

Applied Mathematics: Algorithms, Programming, Modal Logic.

OS: Linux, Unix, Windows Servers.

Databases: MSSQL, Oracle, MySQL, PostgreSQL, MongoDB, DynamoDB, Neptune, Neo4j.

Programming Languages: Python, R, Wolfram, SAS, C/C++, Java, MPL, Matlab.

Languages

SPANISH (Native proficiency)

ENGLISH (Functionally native proficiency)

KOREAN (Limited working proficiency)

Other Interests

English Public Speaking. Toastmasters: CC, ACB, ACS, CL.

KAIST-ETRI, SOUTH KOREA

- Developed a signal processing neural network to improve the recognition of Korean voice command using a neck microphone.

CEO, Cofounder - 2002 to 2004

CT&S, COLOMBIA

- Non-profit organization founded to work as a liaison between the research group, COLCIENCIAS, the National Research Observatory of Colombia and South America Scienti Network.

RESEARCH

Ph.D. in Statistics Advisor – Universidad de Valparaíso

- Cristian Ubal, 2023.
- Erika Cantor, 2023.
- Gustavo Di Giorgi, 2022.
- Marvin Querales, 2020.

Selected Publications

- Volatility forecasting using deep recurrent neural networks as GARCH models. Comput Statistics. <https://doi.org/10.1007/s00180-023-01349-1> 2023.
- A stacking neuro-fuzzy framework to forecast runoff from distributed meteorological stations. Applied Soft Computing 118. <https://doi.org/10.1016/j.asoc.2022.108535> 2022.
- Biological knowledge-slanted random forest approach for the classification of calcified aortic valve stenosis. BioData Mining 14, 35. <https://doi.org/10.1186/s13040-021-00269-4> 2021.

SELECTED TALKS

- SofIA your document review assistant powered by GenAI: Revolutionizing Occupational Health and Safety management. Powered by Quicksight. AWS. Santiago. Chile. 2024.
- Artificial Intelligence in the Analysis of Psychosocial Factors. I Ibero-American Congress on Psychosocial Risks. Caxias Du Sul. Brazil. 2024.

- Big Data Analytics: challenges and opportunities in EHS and ESG for statistics with AI in the cloud. Mente Estadística: 70 años descifrando a Colombia. DANE, Bogota, Colombia. 2023.
- Occupational Health, Safety and ESG Insights made easy: AI-Driven decisions. Brighttalk (Available online). AWS. 2023.
- Good practices and scalable BI. Previsis use case. QuickSight, Café y Churros Serie de Seminarios Web. Session 2. AWS. 2023.
- Artificial Intelligence in the era of big data and the cloud in the context of occupational health and safety. Polytechnic Naval Academy. Viña del Mar. Chile. 2023.
- Data Science: challenges and opportunities for statistics in the cloud. XI International Seminar on Applied Statistics. Ecuadorian Statistical Society. Quito, Ecuador. 2023.
- Operational and Advanced Analytics for the management of occupational risks in AWS. Powered by QuickSight Roadshow – Santiago, Chile. 2023.
- Benefits of data democratization and business intelligence with Machine Learning using Amazon Quicksight. AWS Summit México. (Available online). CDMX. México. 2023.
- AI-Assisted Assessment of the Impact of Security Activities on Incident Outcomes. 2nd. International Conference for Safety Labor and Health in mining. Safemining. Chile. 2022.
- Data scientists the new experts for industry 5.0. Escuela Colombiana de Ingeniería. El tiempo Newspaper. Colombia. 2021.
- Improving your professional profile in Statistics and Data Science to move up in the labor market. Workshop in Data Science. Universidad de Valparaíso. Chile. 2020.
- TEDxKAIST: Words that can change lives (Available online). Daejeon, South Korea. 2011.

