

ROBSON CORDEIRO

Data Scientist

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Green Card holder – NO visa sponsorship required

SUMMARY

High-performing Data Scientist with a Ph.D. degree in Computer Science and experience in both industry and academia. Expert in Database SQL, fraud detection, outlier detection, classification, and clustering.

PROFESSIONAL EXPERIENCE

Innovation Consultant
PNC Bank

Pittsburgh, PA
2024 - Present

- Created a fraud detection tool that can increase income considerably
- Identified features that largely improved the percentage of fraud detected by a model

Project Scientist
Carnegie Mellon University

Pittsburgh, PA
2024 - Present

- Found 2 unusual behaviors in financial data that were previously unknown to domain experts, catching hundreds of fraudulent transactions that would go otherwise unnoticed
- Created a tool to visually inspect unusual behaviors in financial data, which allowed domain experts to deem as fraudulent or suspicious 2 behaviors identified previously

Data Science Researcher and Professor
Universidade de Sao Paulo – USP

Brazil
2013 - 2023

- USP is the premier university in Latin America
- Created over 20 innovative machine learning tools. It includes software for multimodal data classification, visualization, fraud and anomaly detection, and clustering applied to finance, ecommerce, cybersecurity, and social networks
- They all outperform the best competitors in efficiency or effectiveness by being up to 4 orders of magnitude faster or up to 50% more accurate, as demonstrated through extensive experimental evaluation and verified by independent peer reviewers
- Taught 33 courses on SQL-based modeling, querying, and manipulation of databases and data warehouses, software engineering, machine learning, algorithms, data structures, and object-oriented programming to graduate and undergraduate students
- Mentored 11 Ph.D. or M.Sc. graduate students with 100% success rate

ACHIEVEMENTS

Created 20+ Machine Learning Tools Link It includes fraud detectors for financial data, and surveillance software used in practice for U.S. national security	Published 40+ articles in top venues Link 40+ articles published in world-class data science int. conferences and journals, like ACM's KDD and CIKM, IEEE's ICDM, ICDE and TKDE, SIAM SDM, and ECML / PKDD	Best CS Dissertation Award Link Won first place out of all Computer Science Ph.D. Works concluded over the year in Brazil, as evaluated by the Brazilian Computer Society
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TECHNICAL SKILLS

General: Machine Learning , Artificial Intelligence, Data Mining, Software Engineering, Databases, Cloud Computing

Languages/Tools: Python, Java, C++, SQL, Cypher, Git

Machine Learning, Stats and Experimentation:
Classification (XGBoost, Random Forest, AutoGluon), Clustering (K-means, DBSCAN, EM), Anomaly detection (iForest, KNNOutlier, LOF), Principal Component Analysis, Time series forecasting (ARIMA), Embedding (t-SNE, UMAP), Visualization (Charts, Histograms, Heat maps, Box plots, Word clouds, Critical difference diagrams), Hypothesis testing, Covariance and correlation modeling

Libraries/Frameworks:
scikit-learn, MLlib, SciPy, Spark, Pandas, Oracle, Neo4j, NetworkX, Cytoscape.js, Streamlit, Matplotlib, seaborn, NumPy, MATLAB

EDUCATION

Post-Doctorate, Computer Science Universidade de Sao Paulo – USP	Brazil
Ph.D., Computer Science Universidade de Sao Paulo – USP	Brazil
M.Sc., Computer Science Universidade Federal do Rio Grande do Sul – UFRGS	Brazil
Bachelor of Science, Computer Science Universidade do Oeste Paulista – UNOESTE	Brazil