

# LUIS A. ESCOBEDO

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Experienced Data & Analytics executive with a proven track record of leading and scaling data and engineering teams that have built and shaped products with global impact. Strong technical background in Data Engineering and Machine Learning. Currently serving as Senior Director of Data & Analytics Engineering at ADP, Human Resources Outsourcing (HRO).

## PROFESSIONAL EXPERIENCE

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### **Senior Director of Data & Analytics Engineering, HRO, ADP** June 2023 - Present

- Led a diverse team of 22 data professionals, including analytics engineers, data operations engineers, and data product managers, fostering a collaborative and innovative culture that empowered them to deliver impactful solutions.
- Spearheaded data initiatives that optimized resource allocation for customer-facing associates, resulting in improved service levels and \$10 M in potential increased revenue.
- Established the foundational data infrastructure that enabled early risk detection and customer journey mapping, reducing the Annual Controllable Revenue losses by \$7.5 M.
- Delivered high-quality data pipelines for pricing optimization, churn mitigation, and margin expansion, driving \$28 M in revenue growth for our PEO business.
- Reduced the data platform compute cost by 30% through optimized resource allocation and infrastructure improvements.
- Implemented data quality and cataloging technologies in the data platform, increasing data utilization by 42%, maximizing data value and efficiency.

### **VP of Data and Analytics, REEF Technology** January 2023 - June 2023

- Pioneered the advancement towards AI by spearheading the development and implementation of a data engineering excellence strategy, resulting in notable achievements such as enhanced operational efficiency, significant cost savings, and initial revenue growth.
- Developed and executed a global data governance framework to ensure data consistency, security, and compliance across all regions, enabling seamless data integration and analysis for AI initiatives.
- Orchestrated the establishment of a centralized data lake and data infrastructure, consolidating disparate data sources and enabling efficient data processing and analysis, laying the foundation for advanced AI applications.
- Implemented cutting-edge data analytics and visualization tools to enable real-time monitoring and tracking of key performance indicators (KPIs), providing actionable insights and facilitating data-driven decision-making at all levels of the organization.
- Collaborated with cross-functional teams, including operations, finance, marketing, and product, to identify and prioritize AI use cases and develop data-driven solutions to address business challenges and opportunities.
- Drove the adoption of data-driven decision-making culture across the organization through training programs, workshops, and knowledge sharing initiatives, empowering employees to leverage data and AI to drive business growth.

### **Senior Director of Data Science & Analytics, REEF Technology** September 2021 - January 2023

- Reduced the current costs of the technology supporting global enterprise data and data science use cases by 60% through the implementation of quarterly and multi-year strategic roadmaps.
- Implemented a comprehensive global policy for Master Data Management, resulting in a 30% increase in data products adoption and significant improvements in data quality, with completeness and accuracy approaching 99%.

- Achieved a 100% success rate in detecting and correcting data and concept drifts, avoiding any potential negative impact on business operations due to a decrease in model performance using REEF's MLOps platform.
- Established unanimous agreement regarding the delineation of Key Performance Indicators (KPIs) to oversee the operational efficiency of REEF's kitchens. Leveraging these KPIs, REEF effectively monitored the performance of our vessels with near real-time precision, gauging their trajectory towards attaining profitability.
- Constituted a data science framework that led to a clear, effective process for creating and consuming data products throughout the company, resulting in a reduced risk of investing in unproductive projects and a guaranteed return on investment.

**Director of Data Science, REEF Technology**

May 2020 - September 2021

- Improved customer feedback analysis through the development of a natural language processing capability, resulting in a 35% decrease in orders' defect rates and a 10% increase in sales through targeted marketing campaigns in the United States.
- Led the development of a forecasting capability that eliminated unproductive scheduling and strengthened inventory management. The forecast effectively lowered labor costs by 17% and food costs by 25% in the North American market.
- Optimized REEF's proximity network to align with consumer demand for goods and services through a location-allocation model, with a projected impact of \$150 M for food and grocery delivery, and last-mile fulfillment.
- Maximized revenue potential of REEF's kitchen's business through the implementation of ensemble learning algorithms, which optimized the selection of brand and cuisine mix for REEF locations in North America. The predicted revenue increase is approximately USD \$80 M.
- Pioneered the implementation of state-of-the-art Machine Learning Operations in REEF to streamline the development, deployment, and monitoring of models. This resulted in a 100-fold increase in speed, with current models running 2 orders of magnitude faster.
- Expanded the Data Science team ten-fold, adding product managers, data scientists, and data engineers to drive growth and deliver impactful data products and data-driven insights.

**Senior Data Scientist, Quantumblack, AI by McKinsey**

August 2017 - August 2019

- Established a world-class Data Science Center of Excellence and a multi-year data science strategy, delivering a 40% increase in revenue for a Latin American consumer packaged goods client through the implementation of hierarchical clustering and marketing mix modeling in the first use case.
- Formulated an optimization-based go-to-market strategy for an American company entering the Brazilian agricultural market, leading to estimated sales of USD \$5.5 B.
- Saved a Brazilian banking client USD \$121 M in operational costs with the optimization of branch footprint through the use of efficient tree-based machine learning algorithms.
- Maximized steel production for a Brazilian client by utilizing ensemble learning to strike the perfect balance between output and cost efficiency, representing USD \$30 M in contribution margin.
- Decreased transportation expenses by 20%, equating to a reduction of USD \$3.3 M, through the creation of optimized routes for a Brazilian client's private employee shuttle service.
- Lessened medicine waste by 40% for a Brazilian cancer hospital group through the implementation of simulation-based optimization in treatment schedule and planning policies, resulting in a savings of USD \$1.5 M.

**Analytics Consultant, Center for Innovation in Teaching & Learning (CITL)**

August 2013 - July 2017

- Boosted sales by 15% through the implementation of a role play based training platform for a retail client in the US Midwest.
- Amplified online course engagement at the University of Illinois by 15%, leading to a heightened student experience, through the use of time-series analysis and interactive R Shiny web apps on clickstream and video event data.

- Increased the yearly admission of international students with outstanding academic record by 7% in the College of Engineering. Excellent academic performance from past international students showed that limited English proficiency should not be considered a barrier for admission.
- Reduced the international students churn in the English proficiency courses requirements by 10% per semester. Students remaining in class showed a natural progress in their English proficiency achieving grades of 80% or more.
- Elevated the accessibility and usefulness of essential data analytics resources across the University of Illinois by initiating and managing the CITL Data Analytics Group Wiki and GitHub accounts, providing tutorials for various software and statistical methods.
- Delivered insightful analytics solutions to University of Illinois faculty and students through expert consulting services.

## SKILLS

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### Leadership Skills

- Product mindset: Expertise in leveraging the value of data to drive business growth by using a customer-focused approach, monetizing data, ensuring data accessibility, reliability, and security, promoting data literacy, and implementing effective data governance policies.
- Strategic thinking: Demonstrated ability to create a vision for the data science function and develop a strategic plan for its implementation and success.
- Cross-functional collaboration: Master in leading cross-functional teams, managing projects and initiatives, and fostering collaboration between different teams to achieve common goals.

### Technical Skills

- Modeling: Machine Learning Algorithms, Bayesian Modeling, Time Series, Natural Language Processing, Optimization, Statistical Modeling, Hypothesis Testing, Spatial Econometrics.
- Machine Learning Operations: EC2, Sagemaker, Spark, Airflow, Kubernetes, MLflow, Jenkins, Git.
- BI Tools: Tableau, Power BI.
- Cloud: AWS, Azure.
- Code: R, Python, SQL.

## EDUCATION

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### **Ph.D., Geospatial Economics**

*University of Illinois at Urbana-Champaign, Champaign, IL*

### **M.S., Geospatial Economics**

*University of Illinois at Urbana-Champaign, Champaign, IL*

### **B.A., Geography**

*Pontificia Universidad Catolica del Peru, Lima, Peru*