

Santiago Bolaños Vega

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Education

Carnegie Mellon University, Pittsburgh, PA, United States

August 2024 – December 2025

Master of Information Systems Management

- Relevant Coursework: Distributed Systems for Information Systems Management, Introduction to Machine Learning, Machine Learning in Production (AI Engineering), Measuring Social
- Leadership: Teaching Assistant for Distributed Systems for Information Systems Management

University of the Andes, Bogota, Colombia

August 2017 - December 2021

Bachelor of Science, Systems and Computer Engineering

- Relevant Coursework: Machine Learning Techniques, Architecting Digital Enterprises, Business Intelligence, Transactional Systems
- Leadership: Teaching Assistant for Enterprise Architecture and Math (linear algebra, and differential, integral, and vector calculus)

Skills

Functional: Data Analysis, Machine Learning, Database Management, Version Control, Lean management, Data Science, Data Visualization
Languages: Python, Java, JavaScript, SQL

Libraries: NumPy, Pandas, Scikit Learn, Matplotlib, PyTorch, Surprise

Tools: Power BI, KNIME, Hadoop, Spark, AWS, Azure, PostgreSQL, MongoDB, Oracle, Git, Jupyter, Docker, MLflow, Kafka, Flask, TomEE

Professional Experience

IT Senior Consultant, Bip Consulting, Bogota, Colombia

April 2023 - July 2024

- Architected and implemented data migration processes to transition sensitive information for over +3,000 customers and, +8,000 accounts between two Caribbean banks, leveraging ETL practices and ensuring adherence to security protocols
- Conducted preprocessing, cleansing, and transformation on a dataset encompassing 21 entities, utilizing Python and SQL to ensure data integrity and streamline the migration process
- Built a data-driven feasibility model for Hyperscale Data Centers in a Colombian city, incorporating geospatial analysis, market trends, and operational cost metrics to identify optimal locations and strategic advantages
- Created 19 commercial proposals based on client-specific data insights, achieving a 36% conversion rate with seven projects successfully initiated

IT Consultant, Bip Consulting, Bogota, Colombia

October 2021 - March 2023

- Designed a data architecture in Azure for Colombia's primary stock market surveillance institution, supporting five data use cases to enhance data management and predictive analytics capabilities.
- Performed technical and functional due diligence for a digital insurance platform (Insurtech), conducting in-depth assessments to define 11 strategic initiatives critical for investor engagement and alignment
- Built an interactive business intelligence dashboard using Power BI to track performance across seven product categories and segment customer profiles, providing actionable insights for a Colombian microfinance bank's three-year strategic plan
- Partnered with three start-ups to identify four innovative digital solutions for a Colombian microfinance bank, leveraging agile methodologies to accelerate product delivery and minimize time-to-market

IT Consultant Intern, Bip Consulting, Bogota, Colombia

January 2021 - July 2021

- Evaluated, proposed, and tested enhancements to three critical processes—payments, procurement, and onboarding—at a financial services company, leveraging process mining techniques to reduce full-time equivalents (FTE), and optimize takt time
- Designed an evaluation framework for ERP selection for an industrial sector company, leading to the adoption of MS Dynamics by addressing functional and technical requirements and minimizing implementation gaps

Academic Projects

Movies Recommender System, Pittsburgh, PA, United States

February 2025 – May 2025

- Developed and launched a high-performance movie recommendation system using collaborative filtering (KNN with Means, SVD), capable of serving 1 million users and processing a catalog of 27,000 titles [Python, Surprise, PostgreSQL, Docker, MLflow, Kafka, Flask]

Crime Data Analysis, Pittsburgh, PA, United States

December 2024

- Developed MapReduce program to analyze crime data, identifying aggravated assaults near specific locations using geospatial calculations and generating KML files for visualization in Google Earth [Java, Hadoop]

Pocket Dictionary App, Pittsburgh, PA, United States

October 2024 – November 2024

- Developed a distributed systems architecture for a pocket dictionary consisting of a Java-based reactive server, an analytics dashboard, an event log stored in MongoDB, and an Android app to consume and display server information [Java, MongoDB, TomEE]

Accomplishments

- **The Night of the Best 2021**: Awarded by Colombia's Ministry of Education for achieving a top national score in the Saber Pro Test.