

Juan Sebastian Castro Tovar

Head of Innovation, Processes & Analytics | Supply Chain & AI/ML Solutions Expert

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📍 Carrera 14 5 - 05, Conjunto Fontana Park, Torre 1 - Apartamento 405, Cajicá - Cundinamarca.

📅 Born: January 20, 1994, Villavicencio, Meta, Colombia



Technology Innovation & Process Architecture Leader with an exceptional track record of transforming operational complexity and global procurement into scalable, automated, and mathematically optimized systems. My core value proposition lies in a high-impact, hybrid methodology: deep-diving into the raw physical and commercial workflows to re-engineer them from the ground up, and subsequently architecting and deploying advanced digital solutions using Artificial Intelligence (CV/NLP), Machine Learning, RPA, mathematical modeling, and cloud data pipelines.

Holding an M.S. in Business Analytics from the Pontificia Universidad Católica de Chile and a B.S. in Industrial Engineering from the Universidad Nacional de Colombia, I merge scientific rigor with strong engineering leadership to direct software, data, and innovation teams. I have successfully guided the deployment of mission-critical systems (including agricultural computer vision tools, algorithmic routing and fleet platforms, and automated global sourcing workflows), consistently translating technical curiosity into double-digit operational efficiencies, systematic cost reductions, and measurable competitive advantages.

Skills & Competencies

- Core Knowledge & AI:** Agile Methodologies, Project Management, Supply Chain Management, Global Procurement, Process Optimization, Mathematical Modeling, Linear Programming, Metaheuristics, Stochastic Models, Artificial Intelligence, Large Language Models (LLMs), RAG (Retrieval-Augmented Generation), Agentic Workflows, Machine Learning, Computer Vision, Business Analytics.
- Development & APIs:** Python, Go, Node.js, Java, C++, C#, Kotlin, ReactJS, SQL, Google App Script, R, MATLAB, Scilab, Git, \LaTeX .
- Data, Cloud & Analytics:** PostgreSQL, Google Cloud Platform (GCP), BigQuery, Power BI, Tableau, Power Query, Power Pivot, RStudio, Advanced Excel.
- Tools & Agility:** Scrum, Kanban, Jira, Azure DevOps, Monday, Notion, Power Apps, SharePoint, Microsoft Project, Google Drive, Overleaf.
- Paradigms:** Object-Oriented Programming (OOP), Functional, Structured, Dynamic, Agent-Based programming.

> Only competence levels where I possess intermediate to expert knowledge are listed.

Professional Experience

Jan 2025
Present

Head of Innovation and Development, C.I. Sunshine Bouquet Colombia S.A.S., Sabana de Bogotá

- > ****Led multidisciplinary teams**** spanning software development, advanced data analytics, and digital innovation projects across the entire corporate operation.
- > ****Spearheaded the technical direction of an intelligent RPA tool**** (built with Python and relational databases) to automate the global purchasing process, eliminating operational bottlenecks and significantly reducing transaction cycle times.
- > ****Directed the engineering and implementation of a Computer Vision system**** for automatic flower counting across various growth (phenological) stages in greenhouses, integrating it with agricultural inventory controls and harvest yield estimates.
- > ****Designed a critical-path routing system for flower picking and sorting based on physical positioning****, optimizing field operator routing in consolidation centers using advanced routing algorithms.
- > ****Architected and deployed a granular corporate budgeting system (Budgets 2.0) and environmental scanning simulator (FastAPI, Angular, PostgreSQL, GCP, Streamlit)****, ingesting data from SAP for real-time auditability and market trend simulations.

Python SQL PostgreSQL GCP FastAPI Angular Streamlit Git GitHub Computer Vision RPA Jira
Agile (Scrum)

Jan 2020
Dec 2024

Head of Logistics Projects and Processes, C.I. Sunshine Bouquet Colombia S.A.S., Sabana de Bogotá

- > Managed the process engineering and physical operations teams (receiving, warehousing, picking, and shipping) at the main logistics hub, replacing legacy workflows with digital systems.
- > Designed and developed a truck fleet maintenance management platform, automating preventive and corrective tracking and minimizing vehicle downtime.
- > Implemented a Logistics Clusters analytical model for route optimization and supply chain consolidation based on Business Intelligence, yielding a 30% reduction in transport costs.
- > Developed a multi-stop tariff optimization algorithm for flower carrier payouts based on geographical distance and stops, reducing total freight costs by 12%.
- > Built and deployed a digital dispatch and logistics request system for flower and dry materials, generating a 6% increase in pick-up effectiveness.
- > Led the operational expansion and setup of the data analytics hub for the new business unit in Quito, Ecuador.
- > Designed and developed custom operational control interfaces using Power Apps and SharePoint for real-time inventory and fleet shift tracking.
- > Designed circular economy workflows for sorting, classifying, and reclaiming packaging materials, successfully recycling 30% of field inventory write-offs.

Python SQL PostgreSQL GCP R Power Apps SharePoint Power BI Power Query Power Pivot Monday
Microsoft Project Jira

Dec 2018
Dec 2020

Logistics Processes Analyst, C.I. Sunshine Bouquet Colombia S.A.S., Sabana de Bogotá

- > Designed the web platform and database architecture for automated booking and assignment of the company's internal fleet.
- > Developed the mathematical model and relational schema to migrate carrier payments from a flat-rate per-route system to a dynamic system based on multiple stops and geographical distances.
- > Developed and deployed business intelligence (BI) dashboards and data stores tracking critical performance metrics for warehouse and logistics operations.

Python SQL R Google Apps Script Power BI Tableau Advanced Excel Power Query Microsoft Access

Jun 2018
Dec 2018

Logistics Engineering Intern, C.I. Sunshine Bouquet Colombia S.A.S., Bogotá DC.

- > Designed the first phase of the fleet routing web platform, managing everything from operational requirements gathering to system use case definition and data flow modeling.
- > Developed a mathematical optimization model (Vehicle Routing Problem - VRP) for cargo space and truck allocation, forming the core algorithm of the routing web platform.

VBA Scilab Microsoft Excel Microsoft Visio

Languages

Spanish: Native



English: Conversational (B1)



Strengths

- > Leadership
- > Effective Communication
- > Autonomy & Initiative
- > Rapid Adaptability
- > Quick Learning & Curiosity
- > Team Collaboration
- > Emotional Intelligence & Resiliency

Education

2024 - 2026	M.S. in Business Analytics, Pontificia Universidad Católica de Chile, Santiago, Chile.
2021 - 2023	M.S. in Supply Chain Management, Universidad EAN, Bogotá, Colombia.
2016 - 2020	B.S. in Industrial Engineering, Universidad Nacional de Colombia, Bogotá, Colombia.
2005 - 2009	Technical High School Diploma in Electromechanics, Instituto Técnico Industrial, Villavicencio, Colombia.

Interests

Hobbies	Creative writing (currently writing a literary novel, periodic updates can be followed here), playing the piano and guitar, cycling, and running.
Academic	Heuristic optimization methods, economic forecasting modeling, physical systems modeling, actuarial sciences, technological foresight, digital transformation, advanced data analytics, supply chain management, and computer programming.
Professional	Production systems logistics, transport and routing optimization, warehouse layout optimization, time and motion study, supply chain engineering, demand forecasting, technological foresight, and digital transformation.