Rodrigo Castillo

ARCHITECTURE / BIM · VDC / AUTOMATION AND AEC TECHNOLOGY

Nuevo León, Mexico

PROFILE

Architect with experience in BIM modeling and coordination, process implementation, technical training, and tool development for architecture, engineering, and construction. My work has connected models, data, and project teams: from documentation and multidisciplinary reviews to automation, analytics, and asset information visualization.

PROFESSIONAL EXPERIENCE

BRIO Energía

2026

Virtual Designer

Asset information prototypes that connect BIM models, reality capture, and documentation; exploration of 3D experiences for operations.

GP Construcción

Since Feb. 2023

VDC-R&D · Database Modeler · Unity Application Developer

Automation of BIM workflows, property extraction and analysis, quantity takeoffs, dashboards, and coordination tools. Development of applications and three-dimensional experiences for project information access.

ICATEM

Mar. 2022 – Feb. 2023

BIM Implementation and Training

BIM support across five Walmart commercial projects; modeling, coordination, team support, working resources, and review of procedures for documentation and information management.

Estudio de Arquitectura y Modelado

Sep. 2021 – Feb. 2022

BIM Specialist

Development and review of architectural models, documentation, and project coordination activities.

DARCO

Feb. 2018 – Aug. 2021 / Nov. 2019 – Nov. 2023

BIM Specialist / Technical Consultant · Autodesk Certified Instructor

Modeling, documentation, coordination, and technical support. Collaborative development of BIM content for manufacturers; discipline-specific Revit instruction and BIM Manager modules.

PROJECTS AND SECTORS

References spanning different stages, disciplines, and project types.

Government and institutions	INE (2 projects) · Judicial Branch (2 projects) BIM modeling and coordination
Healthcare and airports	Hospitals in Panama and Nuevo León · SEMAR Teaching Hospital · NAICM · airport in Baja California Modeling and digital delivery, depending on the project
Retail and industry	Walmart · Construvita · Brembo · LEGO · Volvo · Bobcat Modeling, coordination, digital delivery, and preconstruction, depending on the project
Industrial tenders	Siemens · Mondelez · Mabe Preconstruction and tenders
Housing, offices, and hospitality	Banco Santander · BeGrand Tower · residential houses · Four Seasons (Casitas) Modeling, coordination, and documentation, depending on the project
Infrastructure	Mexico–Toluca Train · Nuevo León Suburban Train · El Cuchillo II Dam Modeling and digital delivery, depending on the project

DIGITAL DEVELOPMENTS AND SOLUTIONS

Steel traceability on site · Connects models, delivery records, and field progress to verify pieces and quantities.
Models ready for coordination · Automates model downloads and federation preparation from Autodesk Docs.
BIM data from federated models · Extracts properties from federated models into Parquet files for analysis.
Automated exports from Revit · Streamlines NWC and IFC generation from linked Revit models.
BIM viewers connected to information · Connects BIM objects, reports, and reality capture in interactive viewers.
Exploring projects in 3D · Brings together BIM, geography, panoramas, and point clouds in 3D environments.
BIM analytics for projects and construction · Integrates dashboards for quantities, 4D progress, documentation, and procurement.
Automating processes in Revit · Brings together 165 automations for modeling, data, drawings, and BIM review.
BIM audits of models and drawings · Applies property checks and identifies issues in drawings and models.
BIM implementation in commercial projects · BIM support across five commercial projects, including processes and training.
BIM and budget reconciliation · Participation in reconciling BIM quantities with BOQ items for industrial construction.
Documentation automation · An add-in for preparing views, templates, dimensions, tags, and sheets.
Auditing internal Revit information · A tool for extracting internal Revit information for subsequent analysis.

EDUCATION, TEACHING, AND COLLABORATION

Architecture · Instituto Politécnico Nacional

BIM training Revit Architecture, Structure, and MEP diploma courses; preparation for professional assessments and BIM Manager modules at DARCO.

Content for manufacturers Collaborative work on families and libraries for Puertas de Veracruz, Leflam, and Nacobre, with accepted deliverables.

Professional involvement Committee member at Iniciativa BIM since Oct. 2021.

TOOLS AND APPROACHES

BIM and collaboration · Revit, Navisworks, IFC, Autodesk Docs, Autodesk Platform Services.
Development and automation · Dynamo, Python, C#/.NET, Revit and Navisworks APIs, WPF, Power Apps.
Data and analytics · Power BI, DAX, Apache Parquet, DuckDB, Excel, JSON, Vcad, and Speckle.
3D visualization · That Open Company (Fragments), Unity, Cesium, 3D Tiles, Gaussian Splatting.
Generative AI · Support for programming, research, review, and technical documentation.