David Leonardo Casas Baquero
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Professional profile

Civil engineer with a specialization in structures, seismic engineering, and materials, complemented by two years of hands-on experience in designing, modeling, and conducting risk analysis for seismic forces across various concrete systems. Proficient in seismic assessment, geographic information systems, and programming tools. A dedicated enthusiast of programming for process automation and data analytics. Recognized for integrity and adeptness in overcoming challenges beyond the comfort zone. Demonstrates strong teamwork, interpersonal, and assertive communication skills. Adaptable to new goals and professional environments.

Academy qualification

Master's degree in structural engineering
Universidad de los Andes
Bogotá, 2020-2023

Bachelor's in civil engineering
Universidad de los Andes
Bogotá, 2016-2020

Courses and qualifications

Data Analytics (6 months)
Universidad de los Andes
Bogotá, 2023

Financial Modeling & Valuation Analyst (FMVA®) Certification
Corporate Finance Institute (CFI)
Bogotá, 2023

BIM for civil engineering (136h)
Naska digital and Autodesk
Bogotá, 2021

Job Experience

Client Data Analyst (Feb 2023 - Present)
Empowerment Labs
- Data analysis and app configuration for a wealth management application.
- Dashboarding for taking business decisions.

- Use of SQL for deploying and transforming data bases.
- Use of python for automatizing processes.

Research and project professional (2021-2023)
Project: *Implementation of FEMA P695 for concrete wall systems in Colombia.*
Los Andes University. Civil and environmental department and Argos Group.
- Deployed the FEMA P695 methodology for seismic risk analysis and structural behavior assessment for conventional wall systems.
- Deployed the FEMA P695 methodology for seismic risk analysis and structural behavior assessment for precast wall systems.
- Assistance in the development of nonlinear models for assessing the seismic behavior and risk evaluation of bridges in Colombia.

Research and project assistant - (2020-2021)
Project: *Implementation of precast modular wall systems for building construction in Colombia*
Los Andes University. Civil and environmental department and Argos Group.
- Experimental tests for connection behavior.
- Experimental tests of 1:1 scale wall.
- Linear and nonlinear building modeling using different software as: SAP2000, ETABS, OpenSees.

Research tutor - (2019-2021)
Project: *Seismic evaluation of buildings with thin shear walls in Colombia*
Los Andes University. Civil and environmental department
- Linear and nonlinear building modeling using different software as: SAP2000, ETABS, OpenSees.
- Data analytics for results interpretation.

Engineer assistant (2019-2020)
IDC construcciones y consultores.
- Provide support in schedule control and development of 3D models for construction.

Languages

▫ **Spanish**- Native language   ▫ **English**- Advanced (IELTS C1)   ▫ **Mandarin** –Basic (HSK B1)

Additional information

Software management (Advanced): For managing information, creating reports, dashboarding and different business requirements.

- **Microsoft.**
- **Power BI, Tableau and Dash.**

Programing Languages (Advanced): Proficient in managing databases effectively, employing advanced numeric methods for data analysis, and creating sophisticated visualizations. Experienced in process automation and utilizing scripting languages for Google Apps automation. Skilled in comprehensive data analysis and visualization using various tools and techniques.

- **SQL**
- **Python**
- **Visual basic**
- **JavaScript**
- **MATLAB**

GIS (Advanced): For the modeling and analysis of geographic information.

- **ArcGIS**
- **QGIS**

Building modeling (Advanced): Proficient for building design, analysis, and risk management under seismic events.

- **SAP2000**
- **ETABS**
- **REVIT**

CAD modeling (Advanced): Construction, Structure, Architecture and MEP detailing.

- **TEKLA**
- **AutoCAD**