

# Mateo Martínez Herrera

Medellín, Ant, COL

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## EDUCATION

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**Universidad de Medellín**

*Bachelor of Science in Civil Engineering*

**Medellín, Antioquia/Colombia**

December 2012

- **GPA:** 4.0 / 5.0

## WORK & LEADERSHIP EXPERIENCE

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**Integral S.A. Medellín, Antioquia/Colombia**

*Semi Senior Civil Engineer, Hydraulic Resources* Feb 2013 - Present

- Accountable for the automation of thermal calculations for massive concrete structures. Shared leadership of a multidisciplinary team for dam monitoring and surveillance automation. Responsible for static and dynamic designs of dams, tunnel lining, and prestressed concrete bridges.
- Development of coding algorithms for optimization of thermal analysis using Python.
- Development of coding algorithms for optimization of structures design using Fortran, Python and VBA Scripting.
- Modeling of massive concrete structures using 3D software, such as COSMOS, Code\_Aster, SALOME, AutoCAD, MIDAS GTS/NX.
- Development of coding algorithms for the management of big data resulting from 3D models and calculations.
- Designing massive concrete structures in hydroelectrical projects, such as dam components and hydropower plants

**Concreacero Medellín, Antioquia/Colombia**

*Resident Engineer* Oct 2012 – Feb 2013

- Assisted in the construction of sports courts roofs, being accountable for the material reception, as-built blueprints making, and management of construction site workers.

## SKILLS, ACTIVITIES & INTERESTS

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**Languages:** Fluent in Spanish; Conversational Proficiency in English (B2+)

**Technical Skills:** MERN Stack, Three.js, R3F, Python, Blender, Git

**Interests:** Web development and immersive experiences, 3D modeling, process automation.