

Francisco A. Mayorga Cetina

Mathematician | Software Developer | Data Engineer | Development Team Leader

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Summary

Mathematics professional with over four years of experience in software development using .NET technologies (C#, F#, Visual Basic), desktop applications (WPF), and data tools (Python, SQL).

Proven track record in leading development teams and delivering high-quality solutions. Experienced in backend development, desktop UI, cloud platforms, and API integration.

Currently seeking roles that allow for deeper engagement with modern .NET technologies, frontend frameworks, and cloud-native architectures.

Tech Stack

- **Backend:** C# (.NET Framework, migrating to .NET 6+), Entity Framework, REST APIs, WCF Services
 - **Frontend:** WPF (MVVM), DevExpress XAF, basic React
 - **Cloud:** Azure (Entra ID, App Registrations, Azure SQL), AWS (EC2, S3, Load Balancer)
 - **DevOps & Infrastructure:** Azure DevOps, Terraform, Git, SonarQube, Redmine
 - **Databases:** SQL Server, Oracle (PL/SQL), MySQL, BigQuery
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Experience

Finanzas y Actuaría (Finac S.A.S)

Skills & Tools: Visual Studio, Azure DevOps (TFS-Git), .NET Framework (C#, F#, VisualBasic), SQL Databases, Redmine, SonarQube, DevExpress, ADO.NET, WPF, Problem-Solving, Leadership

Development Coordinator – Investments Team (Jan 2025 – Present)

- Led development for investment-related products.
- Coordinated new cloud-based deployments and integration with enterprise identity systems.
- Client-facing support and incident resolution.

Development Coordinator – Maintenance and Support (Sep 2023 – Jul 2024)

- Oversaw maintenance development team.
- Managed resource allocation and task tracking via Azure DevOps.
- Led WPF and .NET-based software enhancements.

Development Professional II (Jan 2023 – Aug 2023)

- Guided junior developers and ensured timely project delivery.
- Developed WPF applications aligned with business needs.

Development Analyst (Nov 2020 – Dec 2022)

- Built and maintained WinForms and ASP.NET applications.
- Developed REST and SOAP APIs.
- Used SQL Server and Oracle databases.

CALA Analytics (By Infórmese)

Skills & Tools: Google Cloud Platform, Python, React, GitLab, Terraform, Confluence

Analytics Consultant (Jul 2024 – Dec 2024)

- Built scalable solutions on GCP using Python and BigQuery.
- Designed CI/CD pipelines and reporting automation.
- Used Terraform for infrastructure provisioning.

Sii Group Colombia (Thales Project)

Skills & Tools: Visual Studio, Mercurial (GIT), .NET Framework, WPF, API Integration, Confluence

Senior .NET Developer (Aug 2023 – Sep 2023)

- Maintained WPF application for global security platform.
- Integrated and documented API suite.

Education

Bachelor's Degree in Mathematics – Universidad Sergio Arboleda (2014–2020)

Honors Thesis: Characterizing Dual Graphs Associated with Triangulations of the Caracol Flow Polytope.

Certifications & Courses

- **B2 Upper Intermediate** – EF SET English Certificate (Aug 2023)
- **HTML, JavaScript, and Web Services** – ITTalent, Bogotá, Colombia (Aug 2022)
- **UI/UX Certification Course** – Programming Hub (Nov 2021)
- **Python 3 Certification** – Programming Hub (Aug 2020)
- **Advanced Python Course** – Programming Hub (Aug 2020)
- **Ethical Hacking with Python** – Udemy (Feb 2020)

Publications

A Unifying Framework for the v -Tamari Lattice and Principal Order Ideals in Young's Lattice

Published in **Combinatorica Journal (Springer)** – June 2023

On Framed Triangulations of Flow Polytopes, the v -Tamari Lattice, and Young's Lattice

Final version: **Apr 2021** – Bar-Ilan University, Ramat Gan, Israel

Published in **Séminaire Lotharingien de Combinatoire, FPSAC 2021 Proceedings**

Activities & Events

- **Regional Programming Marathon (South America North) ICPC** – Contestant, Politécnico Grancolombiano (Nov 2019)
- **XXII Colombian Congress of Mathematics** – Speaker, Universidad del Cauca, Popayán (June 2019)
 - **Poster:** Flow Polytopes and Triangulations of the Caracol Polytope
- **Cube Challenge Sergista** – Organizer, Universidad Sergio Arboleda (2018 & 2019)