María José Jara Herrera

📍 Bogotá, Colombia ✉ jaraherreramariajose@gmail.com 📞 +57 315 797 80 99
🔗 portfolio-storychara.vercel.app 💼 mjarah 🐙 StoryChara 💬 StoryChara ✈ m_jara_h

Profile

Systems and Computer Engineering student at the National University of Colombia with a solid background in software development and a particular focus on web technologies and automation. I stand out for my experience in full-stack project development, using technologies such as Python, JavaScript, React, HTML, CSS, Node.js, SQL, and PostgreSQL. I have significant experience in creating interactive applications and video games, demonstrating versatility and the ability to adapt to different development environments.

Education

National University of Colombia — August 2020 – June 2026
Bachelor of Systems and Computer Engineering — *Bogotá, Colombia*

- **GPA:** 4.4 / 5.0
- **Relevant Coursework:** Computer Programming (Python), Object-Oriented Programming (Java), Data Structures (Java, Python), Operating Systems (Linux Bash), Software Engineering I (JavaScript), Computer Networks (CISCO Bash), Information Theory and Communication Systems (Python), Algorithms (Python), Numerical Methods (Matlab), Software Engineering II (HTML, CSS, JavaScript, React, Node.js), Visual Computing (JavaScript, Processing), Optimization (Python), Introduction to Intelligent Systems (Python), Parallel and Distributed Computing (Java)

Samsung Innovation Campus — November 2022 - April 2023
Bootcamp - Course in Python Coding and Programming — *Bogotá, Colombia*

SENA — June 2019 - June 2020
English Dot Works (Level 0 - 7) — *Bogotá, Colombia*

Claretiano Gustavo Torres Parra E.I. — November 2019
High School Graduate — *Neiva, Huila, Colombia*

- **GPA:** 4.3 / 5.0

Certifications & Courses

- **Diploma in PHP Programming** — *Politécnico de Colombia* (May 2025 – June 2025)
- **Advanced Excel and Power BI Fundamentals** — *Colsubsidio Educación Tecnológica* (May 2025 – June 2025)
- **WordPress for Beginners – Master WordPress Quickly** — *Udemy* (April 2025)
- **Concurrency** — *Skillsoft* (April 2025)
- **Backend with Python** — *Universidad de los Andes* (Feb 2025 – April 2025)
- **AI Now 2.0 – Use GEN AI as your Thought Partner (Modules 1 & 2)** — *Coursera* (April 2025)
- **AI Agents – Transforming Business and Complex Processes** — *Udemy* (April 2025)
- **Artificial Intelligence Course – Principles and Fundamentals** — *Samsung Innovation Campus* (May 2023 – June 2023)
- **Innovation Lab – Practical Programming Workshop for All** — *Universidad Nacional de Colombia* (July 2021)
- **Python Programming Course** — *WIE UNAL* (June 2021 – July 2021)
- **Design Fundamentals** — *SENA* (June 2021)
- **Computer Architecture** — *SENA* (June 2021)
- **Third Person Video Game Design with UNITY** — *SENA* (June 2020)
- **Introduction to Programming** — *Fundación Carlos Slim* (April 2020)
- **Introduction to University Mathematics** — *Universidad EAN* (April 2020)
- **Adobe Photoshop Management** — *SENA* (Nov 2019)
- **C++ Programming Language (Level 0-2)** — *SENA* (Nov 2019 – Dec 2019)
- **Design and Prototyping** — *SENA* (Dec 2018)
- **Tecnoacademia: Science, Technology and Innovation Contextualization** — *SENA* (Nov 2018)

Experience

Ernst & Young S.A.S   March 2025 – September 2025
Intern - AI & Data   *Bogotá, Colombia*
- Automated data processing tasks in Excel using Python scripts (Pandas, Openpyxl) to improve efficiency and reduce manual errors.
- Developed Business Intelligence solutions using Power Query for ETL processes and Power BI (DAX) for creating interactive dashboards.
- Designed and documented process flowcharts to standardize client workflows and improve understanding of procedures.

WIE UNAL   April 2024 – Present
Secretary   *Bogotá, Colombia*
- Managed all aspects of event coordination, from planning and IEEE vTools registration to promotion, to encourage female participation in STEM.
- Designed, developed, and maintained the group's official website, serving as a central platform for communication and digital content.
- Maintained the member database to streamline communication and track engagement.

National University of Colombia   June 2025 – September 2025
Student Assistant - Master's in Systems and Computer Engineering   *Bogotá, Colombia*
- Developed visual content (presentations, diagrams, graphics) for the "Cloud Computing with Terraform" module.
- Assisted in creating a cohesive visual identity for the Infrastructure training line.
- Edited educational videos produced by instructors to improve clarity and engagement.

National University of Colombia   March 2025 – April 2025
Student Assistant - Programming 1   *Bogotá, Colombia*
- Led tutoring sessions for undergraduate students in foundational and object-oriented programming courses.
- Clarified complex programming concepts and guided students through practical exercises.
- Assisted instructors with grading programming assignments and providing constructive feedback.

National University of Colombia   February 2025 – March 2025
Student Assistant - S&I Virtualization P1-1   *Bogotá, Colombia*
- Provided academic support to students in a Python-focused course, helping resolve technical and conceptual questions.
- Graded programming assignments and projects, offering feedback to help students improve their coding skills.
- Assisted in preparing teaching materials and monitoring students' academic progress.

Projects

PlanifiKlub | *React, Node, JSX, Supabase, JavaScript, HTML*   PlanifiKlub
NodeMailer Web Service | *JavaScript, API*   NodeMailer Web Service
- **Description:** Developed a full-stack web app using React and Supabase to streamline event and facility bookings for private clubs.
- Engineered the backend, including database schema design, and implemented a PDF generation feature for administrative reports.
- Led the entire project lifecycle as product owner, defining the product roadmap, prioritizing features, and developing the user authentication and front-end.
- Integrated the SendGrid API to send dynamic, template-based emails and implemented robust error handling with proper HTTP status codes.
- Ensured security and best practices by managing sensitive keys with environment variables and configuring CORS and Morgan middleware.

WIEsite!? | *React, Node, JSX, Supabase, JavaScript, HTML, CSS*   WIEsite!?
- **Description:** Developed the official Single-Page Application (SPA) for the Women in Engineering (WIE) affinity group using React.
- Built a scalable, component-based frontend architecture and created a fully responsive UI with pure CSS and client-side routing via React Router.
- Managed the full development lifecycle, from conceptualization and design to testing and final deployment.

vTools Preview | *React, Node, JSX, JavaScript, HTML*   **○** vTools Preview
- **Description:** Created a React-based web tool to help IEEE volunteers generate and preview HTML for event pages on the vTools platform.
- Developed an interactive UI with React Hooks that provides a live preview and a one-click "copy to clipboard" feature to improve user workflow.
- Engineered a modular frontend architecture and managed the entire project from concept to a fully responsive, production-ready tool.

Cake Delivery | *Python*   **○** Cake Delivery
- **Description:** Developed a text-based RPG with a custom compiler in Python, featuring a retro 80s aesthetic and narrative-driven gameplay.
- Implemented the core game engine, including a text-command parser, state management, NPC interactions, and quest completion logic.
- Created a map-based navigation system allowing players to move between different game locations and trigger narrative events.

Visual Computing | *JavaScript, HTML, Processing*   **○** Visual Computing
- **Description:** A collection of projects recreating classic games and graphics demos using JavaScript and Processing to demonstrate command of physics, animations, and rendering.
- Engineered 2D physics for collision detection, projectile motion, and destructible environments in recreations of Duck Hunt and Angry Birds.
- Implemented 3D graphics techniques, including a procedural generation system for Stonehenge and custom shaders for atmospheric fog effects.

Backend Python | *Python, Flask, SQLAlchemy, API*   **○** Backend Python
- **Description:** Built a complete backend for a web application using Python and Flask, following the MVC architectural pattern.
- Developed a modular RESTful API using Flask Blueprints and defined database models and relationships with the SQLAlchemy ORM.
- Implemented a secure user authentication system with role-based access control and ensured code quality with unit tests and error handling.

Cartidy | *Python*   **○** Cartidy
- **Description:** A software system for managing card collections, built in Python to demonstrate the practical application of core data structures.
- Implemented an AVL Tree for efficient ($O(\log n)$) insertion, deletion, and searching of the main card collection.
- Used Hash Tables for instant ($O(1)$) card lookups and Linked Lists for flexible management of custom decks and subsets.

Tangram | *Java, Processing*   **○** Tangram
- **Description:** An interactive Tangram puzzle game developed in Java with Processing, featuring multiple levels and a custom level editor.
- Designed a polymorphic, object-oriented architecture to handle game pieces, simplifying rendering and collision detection logic.
- Developed the core game mechanics (drag, drop, rotate) and created a unique level editor, allowing users to save and load their own puzzles.

Stardew Time | *JavaScript, HTML, CSS*   **○** Stardew Time
- **Description:** A companion web app for a Stardew Valley roleplay server, built with vanilla JavaScript, HTML, and CSS.
- Developed a dynamic in-game clock synchronized for all players and created a quick-reference database of all in-game shop information.
- Designed a thematic and intuitive UI that centralizes key information, allowing players to stay immersed in the game.

Technical Skills

Languages: Python, JavaScript, Java, HTML, CSS, SQL, DAX
Technologies: React, Node.js, Flask, SQLAlchemy, Processing, Power BI, Power Query, Supabase, SendGrid, Git/GitHub, pandas, openpyxl
Concepts: Object-Oriented Programming, RESTful API Development, Database Design, Data Structures & Algorithms, Computer Graphics, Game Development, Business Intelligence, ETL Processes, Authentication & Authorization, Responsive Web Design
Professional: Product Ownership, Project Management, Agile Methodologies, Team Collaboration, Problem-Solving
Languages: Spanish (Native), English (B2), Japanese (N5)
Others: Inclusivity, Gender Equality, Design and Prototyping, Photoshop and Canva, Social Media Content Management and Creation.