

Juan Carlos Aguilar Torres

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Summary

Software engineering graduate with hands-on experience in full-stack development and system design. Focused on building efficient, maintainable software and delivering seamless user experiences through clean architecture and reliable engineering practices.

Education

University of Costa Rica

Bachelor of Software Engineering, Honors

Mar. 2020 – Jul. 2025

Experience

University of Costa Rica

Full stack developer (Student)

Mar. 2020 – Jul. 2025

- Developed and deployed multiple full-stack web apps using React, Node.js, and SQL Server.
- Designed and optimized relational databases using SQL Server, improving query efficiency and application performance, and implemented non-relational solutions for versatile data handling.
- Collaborated with four 5-member cross-functional teams to gather requirements, implement features, and troubleshoot issues.
- Built and documented REST APIs for authentication, content management, and analytics.
- Improved UI/UX and responsiveness, attaining >98% Accessibility and SEO scores on Lighthouse audits.
- Increased test coverage to 90% with Jest and automated CI checks via GitHub Actions.
- Participated in Agile/Scrum development cycles, including 8+ sprints with planning and retrospective meetings.
- Contributed to system architecture documentation and technical guides for future developers, producing comprehensive docs with Doxygen and in-line comments covering all project modules.

Projects

Content Moderation Admin Portal for Social Platform:

- Developed a comprehensive web-based content moderation system using Next.js, serving as the web team leader. With modern development practices and administrative interface design to create an efficient moderation workflow. Utilized React components and real-time updates using back-end API REST and server-side rendering to implement real-time content review, user management, and moderation analytics dashboards.

3D Virtual Campus in Unity:

- Developed a fully interactive 3D campus using Unity, combining 3D modeling, design, and game development techniques to create an immersive virtual environment. Utilized Unity's scripting tools (C#) to enable interactive elements, including navigation, animations, and event triggers.

Student Projects:

- Trained TensorFlow models to generate musical lyrics and integrated results into interactive web and desktop apps. Optimized NoSQL graph databases for social network analytics, improving query performance and usability.

Technical Skills

Languages: Spanish (native), English (advanced).

Programming Languages: C, C++, C#, Python, JS, HTML/CSS, Java, SQL, NoSQL, Lua

Tools: Windows, Linux, REST-API, Swagger, JSON, GIT, NPM, Jupyter, Figma, Jira, Agile, Scrum, TDD, BDD