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Computer Science (in progress)

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EDUCATION

•Costa Rica Institute of Technology

Bachelor's Degree in Computer Science (in progress)

Year: 4

PROJECTS

•Steam Web Project

2024

E-commerce platform inspired by Steam, with enhanced visual design and functionalities

- Technologies used: Angular, Tailwind, Bootstrap, Node.js, Express, TypeScript, MongoDB
- Developed both the front-end and back-end of the project. On the front-end, utilized Angular, Tailwind, and Bootstrap to create a modern and responsive UI.
- Implemented a scalable REST API using Node.js and Express, fully developed in TypeScript.
- Designed and optimized the database in MongoDB, implementing search indexes and hierarchical category structures for efficient data retrieval.

•Digital Twin National Theater

2024

Web application for a digital twin of the National Theater, integrating real-time sensor data and 3D visualization

- Technologies used: React, TypeScript, SQL, Three.js
- Worked on the maintenance and enhancement of the web application, implementing UI updates and sensor data management for real-time readings.
- Collaborated on a TypeScript-based API, handling SQL queries, controllers, routes, and middlewares for efficient data storage and retrieval.
- Implemented automated tasks such as scheduled email notifications to streamline system monitoring.
- Gained experience in full-stack development, integrating 3D visualization, real-time data storage, and scalable API design.

•Teacher Management Platform

2024

Web application for managing guiding teacher teams and semester plans for first-year students at ITCR

- Technologies used: React, Node.js, Express, AWS Cloud, ngrok
- Developed both the front-end and back-end of the project. Utilized a relational SQL database alongside React, Node.js, and Express. Additionally, Node.js and AWS Cloud were employed for project deployment.

•WikiSearch

2023

Search engine for the Wikipedia website, which is based on both SQL and NoSQL database engines

- Technologies used: Mongo Atlas, Mongo Atlas Search, Oracle Autonomous Database, Oracle NoSQL Database Cloud, Firebase Real Time Database
- Developed the Loader and Object Storage components. The Object Storage was responsible for storing XML Dumps, while the Loader was an application that periodically scanned the Object Storage. Upon detecting a new file, the Loader processed it and loaded the data into MongoDB Atlas and Autonomous Database.

•Polaris

2023

Intercultural project focused on developing a rover destined for Titan, one of Saturn's moons

- Technologies used: Python, C++
- The goal was to construct a device capable of traveling to Titan, a moon of Saturn. Collaboration with people from various countries emphasized teamwork and skills such as empathy and leadership, which were fundamental to the project's development. The project was time-sensitive with a strict delivery deadline.

TECHNICAL SKILLS AND INTERESTS

Programming Languages: Python, Java, C++, C#, C, SQL, JavaScript, Typescript

Developer Tools: Angular, Tailwind, Bootstrap, Node.js, Express.js, React, GitHub, Visual Studio, Visual Studio Code, NetBeans, CodeBlocks, SQL Server Management Studio

Cloud/Databases: MongoDB, AWS RDS, AWS EC2, Oracle Autonomous Database, Firebase

Soft Skills: Leadership, Problem Solving, Flexible and Adaptable, Active Listening, Cultural Awareness, Critical Thinking, Teamwork Skills.

Languages: Spanish, English(C1)

EXTRACURRICULAR ACTIVITIES

•Completed Airborne Program

March 2023 - December 2023

Aerospace Research and Exploration Company S.R.L (Project Polaris)

- Participated in Tropical Space 2023 and contributed to the mission of creating One Space for all.