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Experience

January 22 – Today Directorate of Material Resources, General Services and Casdastre of Guanajuato, Guanajuato. Position: <u>Geographic database specialist</u> <ul style="list-style-type: none"> Fullstack developer, in charge of creating web applications using React, as the main Frontend framework, which links with the REST-API made with Python, using Flask framework, to connect a PostgreSQL database. Define a data structure with TypeScript, efficiently for frontend data handling, using Redux to manage state, and all the components were tested using Storybook and designed with Bootstrap and some custom CSS. Axios was used to make the requests between front and back. Backend data management through the ORM SQLAlchemy, GeoAlchemy2, for the data and geospatial values, as well as create simple reports, watermarked pdf files and the union of them in a single file using PyPDF, reportLab, jinja2, y wkhtmltopdf. Using Marshmallow made it easier to manage ORM data and optimize the responses with arrays and JSON. The code was versioned through GIT on the GitHub service, using Husky to validate the code before do a commit. For documentation, Sphinx was used, which creates a static web page for a code reference based on the existing comments in the code. The waiting time was optimized with already processes which were reduce to a quarter of the time, as well as better information management. Based on the needs of the company, the architecture proposed was client-server based on microservices. Methodology: Kanban	July – December 21 Instituto Tecnológico de León, Guanajuato. Position: <u>External specialist, Fullstack developer</u> <ul style="list-style-type: none"> Maintaining AWS Lambdas with JavaScript, as well as data link with DynamoDB and BitBucket, checking phone numbers through TWILIO api services as well as sending emails with SENDGRID. Docker as main environment. The code was versioned using GIT with GitHub service, using Husky to check the code before a commit, and to achieve the CD/CI using GitHub actions, Travis CI on an AWS server. Fullstack developer, in charge of creating web apps using NextJS as main frontend framework, linked with Python using FastAPI framework to handle MySQL database. Define a data structure with TypeScript, efficiently for frontend data handling, using Redux to manage state, and all the components were tested using Storybook and designed with Material-UI and some custom CSS. Axios was used to make the requests between front and back, using JWT as security scheme for the requests. Backend data management through the ORM SQLAlchemy, as well as create simple reports using PyPDF, reportLab, jinja2, y wkhtmltopdf, and reading of xlsx files using Pandas and data writing with numpy. Using Marshmallow and Pydantic made easier to handle ORM data at the responses. Based on the needs of the clients the architecture used was microservices. Slack and Jira were used for communication and task assignment. Methodology: Scrum, Xtream Programming, Waterfall
March – September 21 American AXLE, Guanajuato. Position: <u>Data analyst support</u> <ul style="list-style-type: none"> Fullstack developer, in charge of creating web and desktop applications using C#, in .Net Framework and Entity Framework to link SQL Server database using stored procedures. Define a data structure and its relationships using MS SQL Server, as well as the creation of stored procedures and C# with .Net Framework as Backend, JavaScript, HTML, and Bootstrap for frontend. OOP was considered as a programming paradigm on a layer architecture. The waiting time with already defined processes were reduced to one-seventh, and a better information management. The code was versioned using GIT and GitHub service. Methodology: Scrum	July – December 18 Instituto Tecnológico Superior de Guanajuato, Guanajuato. Position: <u>Product Manager, Requirements Analyst, Developer and Tester.</u> <ul style="list-style-type: none"> Fullstack developer, in charge of creating hybrid apps (web and mobile) using React and React Native as the main frontend framework, connecting to a Firebase database as service. OOP was considered as a programming paradigm. The code was versioned using GIT and GitHub service with GitHub pages for store the web application. For frontend design was used JavaScript, Web and Mobile Components and Bootstrap with some custom CSS. Make easy the process of any activity that required consensus, as well to visualize the results in real time. Methodology: Xtream Programming
October 20 International Congress on Software Process Improvement, Zacatecas. Position: <u>Developer and Tester.</u> <ul style="list-style-type: none"> Developer, in charge of creating scripts using Python which links with two databases MariaDB and PostgreSQL, stores pdf files with Google Drive API. SQLAlchemy ORM was used to work with the fields of the databases to perform nested queries. Using Google Drive API to store pdf files, as well as to share the link by email using SMTP, with HTML and CSS templates to be used with jinja2. Methodology: Xtream Programming, Hybrid Waterfall with ISO/IEC 29110.	April 16 EDUCAFIN León, Guanajuato. Position: <u>Product Manager, Requirements Analyst, Developer and Tester.</u> <ul style="list-style-type: none"> Developer, in charge of schedule stakeholder's appointment, check the requirements and test the code wrote, creating desktop app with C#, with .Net Framework to link SQL Server database. Define a data structure and its relationship using SQL Server, and Crystal Reports to show the data into a report. Using C# with .Net Framework as main element to design the backend logic and frontend design. The primary programming paradigm on this project is OOP. Methodology: Xtream Programming

Background / Training

Education	Certificates
2021 Maester's Degree in Software Engineering Center for Research in Mathematics A.C. (CIMAT) Professional ID: (Pending)	2020 Introduction to IoT Cyber Security.
2019 Computer Systems Engineering Instituto Tecnológico Superior de Guanajuato (TecNM Gto) Professional ID: 12136617	2019 Kanban Systems Design (KMP 1). 2018 Google Activate Web Developer II Google Activate Web Developer I. Info Sec Whitesuite Hacking. 2018 Wired Networks with UTP cat 6 and optical fiber. 2017 Development with Python Esset. 2014 OOP development with C# Microsoft.
2015 Software Developer Technician Industrial and Services High School 173 (DGTI) Professional ID: 10449501	Courses and Participations. 2021 International Congress on Software Process Improvement CIMPS. 2020 Secure Dev & Ethical Hacking. 2020 Appreciation and interpretation of ISO/IEC 45001 standard. 2019 Appreciation and interpretation of ISO/IEC 9001:2015 standard. 2017 12 th National Colloquium on Codes and Criptography.

Technical Skills

Languages:

- Spanish (native language).
- English (B2).

Programming Languages:

- Python – Since 2017 (4 years)
- JavaScript – Since 2018 (4 years)
- Java – Since 2016 (1 year)
- C# – Since 2013 (3 years)
- Visual Basic – Since 2016 (1 year)
- PHP – Since 2017 (1 year)
- C++ – Since 2012 (2 years)

Databases:

- MS SQL Server – Since 2013 (3 years)
- MySQL – Since 2016 (1 year)
- PostgreSQL – Since 2019 (2 years)
- SQLite – Since 2013 (3 years)
- Firebase – Since 2018(1 year)
- DynamoDB – Since 2021 (1 year)

<ul style="list-style-type: none"> CSS – Since 2018 (1 year) 	
Frameworks:	
Frontend:	Backend:
<ul style="list-style-type: none"> React – Since 2018 (3 years) React Native – Since 2018 (1 year) TypeScript – Since 2021 (1 year) Redux – Since 2021 (1 year) NextJS – Since 2021 (1 year) Angular – Since 2020(6 months) Storybook – Since 2021(1 year) 	<ul style="list-style-type: none"> Flask – Since 2019 (2 years) FastAPI – Since 2021 (1 year) Pandas – Dese 2020 (1 year) SQLAlchemy / GeoAlchemy / Marshmallow – Since 2018 (2 years) Android – Since 2014 (1 year) SpringBoot – Since 2022 (6 months) Framework .NET – Since 20213 (3 years)
Services:	Software:
<ul style="list-style-type: none"> Github – Since 2018 (3 years) GitLab – Since 2019 (1 year) Jira – Since 2019 (2 years) Trello – Since 2019 (2 years) Jenkins – Since 2019 (1 year) Heroku – Since 2020 (1 year) Docker – Since 2020 (2 years) Google Drive API – Since 2019 (2 years) TWILIO – Since 2021 (3 months) AWS – Since 2021 (1 year) 	<ul style="list-style-type: none"> Matlab – Since 2017 (1 year) Davinci Resolve – Since 2018 (6 months) Adobe Illustrator – Since 2020 (6 months) NGINX Server – Since 2020 (3 months) Docker Desktop / Podman – Since 2020 (1 year) Git – Since 2018 (1 years) Microsoft Office / Libre Office / Google Office – Since 2012 (3 years) Vmware / VirtualBox – Since 2018 (2 years) QGIS – Since 2021 (1 year) Postman / Insomnia – Since 2018 (3 years) Teamviewer – Since 2018 (1 year) Slack / Teams / Skype / Zoom – Since 2018 (2 years)
Software development methodologies:	
<ul style="list-style-type: none"> Kanban – Since 2019 (2 years) Scrum – Since 2017(2 years) Xtream Programing – Since 2017 (2 years) Waterfall – Since 2017 (2 years) ISO/IEC 29110 – Since 2019 (2 years) 	
Operative Systems:	
<ul style="list-style-type: none"> Windows: <ul style="list-style-type: none"> XP. Vista. 7. 8, 8.1. 10 11 Server 2003, 2008, 2012 2013, 2016 	<ul style="list-style-type: none"> Unix / Linux <ul style="list-style-type: none"> Debian 9, 10 Fedora 24 Ubuntu 18, 20 Manjaro (Arch) Garuda (Arch) MacOS 10.10 or Higher
Extra Information:	
Research:	Programming Contests:
<ul style="list-style-type: none"> Analysis of vulnerabilities to web apps. Proposal of an Intelligent Agent for the Management and Mitigation of Cybersecurity Risks in IoT Environments 	<ul style="list-style-type: none"> ACM/ICPC ACM/ICPC Central America Coding-Cup Hackathon Gamification Tecnológico de Monterrey side León Hackathon FinTech Tecnológico de Monterrey campus León Hackathon Centro Fox León Hackathon Campus Party Guadalajara Hackathon Talend Land Guadalajara Hackathon Universidad de Guanajuato Hackathon Zacatecas Hackathon Dolores Hidalgo