

EINAR JHORDANY SERNA VALDIVIA

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Full-Stack Developer

PROFILE

As a programmer with many years of experience in the development of software applications, I possess expertise in the full software development life cycle, from requirements elicitation and design to coding, testing, implementation, and maintenance. I have a strong track record of delivering quality technical and business solutions and engaging with customers effectively.

I have extensive experience and high productivity in developing software using a range of programming languages, including Javascript, Typescript, Node.js, T-SQL, Python, etc. Additionally, I am proficient in working with AWS Lambdas and EC2 Cloud Backend Services, and possess a strong foundation in cybersecurity and databases. I possess expertise and exceptional proficiency in utilizing Python's Flask and FastAPI frameworks, as well as React library In JavaScript.

EDUCATION

CENTER FOR RESEARCH IN MATHEMATICS A.C. (CIMAT)

Master in Software Engineering (Pending)

Zacatecas, Zac
2019-2021

TECNM GUANAJUATO

Computer Systems Engineer

Guanajuato, Gto
2015-2019

CBTIS 173

Programming Technician

Guanajuato, Gto
2012-2015

PROFESSIONAL EXPERIENCE

GOVERNMENT OF GUANAJUATO

Geographic Database Specialist

Guanajuato, Gto
JAN 2022 - Present

As a full-stack developer, I specialize in developing responsive and scalable web applications using technologies like **React**, **Python**, **Docker**, and **PostgreSQL**. My work involves collaborating closely with design and product teams to implement user-friendly interfaces and features. I excel in containerizing applications with Docker for consistent deployment across various environments. Additionally, I have experience writing backend **APIs** with **Flask** for efficient data storage and retrieval. I am adept at conducting unit testing and participating in code reviews to maintain high code quality. Troubleshooting and resolving user-reported bugs is also one of my strengths.

In my previous roles, my purpose was to reduce process time and replace the usage of XLSX custom files, contributing to the development of robust and user-friendly web applications. I have successfully improved security and user experience, optimized backend database queries leading to significant reduction in response time, and collaborated with cross-functional teams to launch engaging features that increased user engagement by 30%.

LEON TECNM

Full Stack Developer

Leon, Gto
FEB 2021 - Dec 2021

As a versatile developer, I have collaborated with a wide range of technologies, including **React**, **Python**, **MySQL**, **Docker**, **MongoDB**, **NodeJS**, **AWS Lambda**, **EC2**, **DynamoDB**, **Sendgrid**, and **Twilio**. My expertise lies in connecting databases through stored procedures to facilitate data interpretation and analysis for informed decision-making. I am skilled in designing user-friendly interfaces and features by creating React and NextJS components. Additionally, I have experience in writing backend APIs using **FastAPI** and **Flask** for efficient data storage and retrieval. I also excel in working with Pandas for data analysis and BitBucket for project management and version control.

Some of my notable achievements include successfully utilizing Python, **SQLAlchemy**, and **Pymongo** to connect MongoDB and MySQL databases, enhancing data interpretation and analysis capabilities, using **pandas**. I have also maintained AWS Lambda functions, optimizing data processing through **JavaScript** and DynamoDB connections. Leveraging cutting-edge front-end technologies like **Redux**, **GraphQL**, **MaterialUI**, **Next.js**, and **Storybook**, I have created compelling user interfaces, leading to an enhanced user experience. Furthermore, I have implemented CI/CD pipelines, deploying projects to AWS EC2 instances using Jenkins and Github Actions for seamless development and continuous deployment.

MCPV

Data Analyst Assistant

Silao, Gto
SEP 2019 - Nov 2020

As data analysts assistant, I have collaborated extensively with **C#** language and the **.Net Framework**. My specialization lies in connecting **SQL Server** databases through stored procedures, enabling efficient data interpretation and analysis to support decision-making processes. One of my significant achievements includes successfully utilizing **C#** and the **.Net Framework** to enhance data interpretation and analysis capabilities when working with SQL Server databases.

GUANAJUATO UNIVERSITY

Computer Network Specialist

Guanajuato, Gto
JAN 2019 - Jun 2019

As a network infrastructure specialist, I have conducted comprehensive assessments of multiple sites and data centers within a research network. Through careful analysis of network architecture and hardware components, I identified areas for improvement and potential enhancements. Working closely with stakeholders, I developed a network model aligned with the research network's goals, scalability, security, and performance requirements.

My contributions included proposing optimized network designs with appropriate equipment, protocols, and technologies to meet connectivity needs for research activities. I successfully implemented robust connectivity solutions, ensuring seamless communication and data exchange between research sites and data centers. Performance testing and fine-tuning further enhanced network efficiency and reliability.

To facilitate future maintenance, I meticulously documented the network model, infrastructure diagrams, and configurations. Overall, my achievements include improving the existing infrastructure, implementing a secure and reliable network model, and enhancing network performance for efficient collaboration and data exchange within the research network.

GOVERNMENT OF GUANAJUATO

Security Specialist

Guanajuato, Gto
SEP 2018 - Nov 2018

As a security specialist, my activities involved conducting vulnerability assessments and penetration testing on the payment portal to identify potential security weaknesses. During this process, I discovered a critical vulnerability that posed a risk to sensitive customer data. Collaborating

with the development team, we promptly addressed the issue and implemented a comprehensive solution to mitigate the vulnerability and ensure the security of the payment portal.

The purpose of these efforts was to protect sensitive customer data and prevent potential data breaches, ensuring the confidentiality, integrity, and availability of the payment system. As a result of our work, we successfully detected and analyzed the critical vulnerability, preventing any unauthorized access and data breaches. Additionally, we collaborated effectively with the development team to swiftly resolve the identified vulnerability and deploy necessary security patches.

To strengthen the overall security posture of the payment portal, we also implemented additional security measures, such as input validation and access controls. Thorough testing and validation were conducted to ensure the effectiveness of the implemented solution, providing a secure and robust payment portal for the organization and its customers.

ACADEMIC PROJECTS

INTERNATIONAL CONGRESS OF SOFTWARE IMPROVEMENT

Zacatecas, Zac

Web Developer

Oct 2019 - Nov 2021

As a web developer, I have been responsible for maintaining and supporting **PHP**-based web applications. I managed and interacted with databases, including **MariaDB** and **PostgreSQL**, to ensure the smooth operation and maintenance of the applications. Additionally, I developed **Python** endpoints and scripts to enhance data management, analysis, and security, effectively integrating them into the existing applications.

One of my achievements includes successfully integrating third-party **APIs** like Google Drive and Dropbox into the applications, which expanded their functionalities and provided additional services to users. Moreover, I utilized **HTML, CSS, and VanillaJS** to maintain and update the front-end of the applications, leading to an improved user experience.

Overall, my purpose was to ensure the effective management and security of data and files within the applications, integrate third-party APIs for enhanced functionality, and maintain an updated front-end for an optimal user experience.

GUANAJUATO TECNOM

Guanajuato, Gto

Full Stack Developer

Aug 2015 - Dec 2019

As a developer, my activities have revolved around utilizing the **React** and **React Native** frameworks to create engaging web and mobile platforms, delivering exceptional user experiences. I have leveraged Node.js to build scalable and high-performance applications, ensuring efficient server-side processing. Additionally, I integrated a NoSQL **Firebase** database for real-time polling applications, enabling real-time elections and student population consensus.

One of my key roles has been providing support and maintenance for existing applications developed with the **.NET framework, C#, and SQL Server** database. I have also ensured that the **HTML, CSS, and VanillaJS** codebase were up-to-date and well-maintained, contributing to high-quality user interfaces.

My purpose has been to combine front-end and back-end development expertise to create exceptional user experiences. I have utilized modern **JavaScript** frameworks like React and React Native to build web and mobile platforms while using Node.js for scalable server-side applications. By integrating the NoSQL Firebase database, I facilitated real-time polling applications for efficient elections and consensus. Furthermore, I have been dedicated to supporting and maintaining applications built with the **.NET framework, C#, and SQL Server** to ensure their smooth operation. Lastly, my achievement lies in delivering exceptional platforms, optimizing server-side processing, enabling real-time interactions, providing effective support, and maintaining high-quality user interfaces for an enhanced user experience.

PORRAS & PORRAS PROFESSIONAL SERVICES

Queretaro, Qro

Full Stack Developer

Nov 2013 - Jun 2018

As a developer, I have successfully designed and developed a web-based quotation and invoicing system using modern web technologies like **HTML, CSS, JavaScript**, and a back-end framework **Flask Python**. This system includes user authentication and authorization features to ensure secure access and user roles for quotation and invoicing functionalities.

Innovatively, I integrated NFC technology with a Raspberry Pi to enable gate opening for authorized personnel, enhancing security and access control to restricted areas. Additionally, I employed computer vision techniques, such as **OpenCV**, on the Raspberry Pi to detect welding activities and trigger ventilation systems for safety purposes.

To streamline processes, I developed automation scripts in Python or JavaScript, enabling efficient quotation generation, invoice creation, and other repetitive tasks within the system. Integration with a database like **MySQL** and **PostgreSQL** ensures efficient data storage and retrieval.

The web application was built with responsiveness and compatibility in mind, ensuring a seamless user experience across different devices and screen sizes.

My achievements include successfully delivering a robust web-based quotation and invoicing system with user authentication, NFC gate opening, computer vision-based safety features, and automation scripts for increased efficiency. The system's design and development encompass a wide range of functionalities and innovations to fulfill its purpose effectively.

SKILLS, ADDITIONAL INFORMATION

- Languages: Native in Spanish; Conversational Proficiency in English.
- Programming Languages: Python; Javascript; NodeJS; C#; VBA; C++.
- Cloud: AWS; Github; GitLab; Heroku.
- Databases: MariaDB; MySQL; PostgreSQL; SQL Server; MongoDB; Firabase.
- Programming Contest: ACM/ICPC; Central America ACM/ICPC; Caribbean Coding Cup.
- Security Certifications: Introduction to IoT Cyber Security; Secure Dev & Ethical Hacking; Information Security; Colloquium on Crypto.
- Management Certifications: Kanban Systems Design (KMP 1); ISO/IEC 45001; ISO/IEC 9001:2015.
- Development Certifications: CIMPS; Google Active Web I and II; Python; OOP with C#.