**Frank Gonzalez**

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Profile

* Full Stack .NET Developer and Analyst with experience designing and implementing enterprise software. Experienced in full project life cycle from design to implementation to integration. C# Microsoft Certified Application Developer. Proven technical lead and mentor.
* Proficient in Relational Database, MS SQL Server, Oracle and DB2. Highly skilled in Object-Oriented Analysis and Design, multi-threading, asynchronous service-to-service communication and WCF. Extensive experience in Restful Services, Signal R, ASP.NET, ASP.NET Core, MVC, Razor, JQUERY, Java Script, Typescript, HTML, and CSS.
* Comfortable in Waterfall and Agile environments. Familiar with Git, TFS and Azure DevOps.

PROFESSIONAL EXPERIENCE

UFL-ABE, Gainesville, FL**January 2022 – Current**

**Lead Senior Application Developer**

* Overcame the challenging task of migration a suite of Web-based application and microservices from HTTP to HTTPS. Created migration roadmap and tested all references to prevent mixed content issues. Deeply involved in creating self-signed certificate programmatically for server and client authentication to mentor other developers.
* Instrumental in the Hydro Exploratory and Data Analytics system which is a suite of services with a Web-based gateway and multiple Restful APIs. Enriched processing capabilities integrating Python and R Language with the Machine Learning Engine of MS SQL Server. Monitored data ingesting to detect anomalies to dispatch alerts and notifications. Created complex, scalable and high performing Web interfaces.
* Diagnosed slow running processes inside MS SQL Server using Machine Learning techniques. Created Restful APIs. Implemented client applications to interact with external Restful services and Web services.

Digital Target Marketing, West Palm Beach, FL**August 2021 – December 2022**

**Senior Engineer**

* Added new functionalities to the Campaign Management System which is a legacy Web-based application and Web API service. Introduced new practices for documenting and was praised by code quality and standards.
* Extensive use of UML for documenting focused part of complex design. Created many artifact-centric business processes.
* Introduced Machine Learning Processing to business experts and product managers.

UFL-ABE, Gainesville, FL**January 2021 – August 2021**

**Lead Senior Application Developer**

* Migrated a complex WCF Service to restful Web API. Redesigned a Web Form legacy application to meet new business goals evolving it in a Single Page Application. Fully involved with Restful API and User Interface design. Expanded Hydro Exploratory System adding Microservice architecture components.
* Fully involved with Web Hooks, gRPC and SignalR processing, Restful API and .NET Core.

ADT-SDI, Boca Raton, FL**December 2019 – January 2021**

**Senior Application Developer**

* Heavily involved with Restful APIs of the major players of Cybersecurity Industry: Fortinet, FortiGate, Cisco FMC, Cisco Meraki and Forti Portal. Received recognition from management for solid and fast implementation of components to interact with such products. Created an MVC Web application to perform Cybersecurity Provisioning. Designed concurrent background processing for detecting service statuses.
* Migrated legacy SOAP Web Service to restful Web API, implemented Token based Authentication and Authorization and migrated and redesigned a Web Form legacy application to consume the Web API.
* Created restful service prototype based on the emerging gRPC framework for Billing and Sales Order management.

ABE-UFL, Gainesville, FL**December 2018 – December 2019**

**Lead Senior Application Developer and Architect**

* Rewrote a legacy Web form application using the MVC paradigm with remarkable performance impact via SignalR. Redesigned a data transfer solution to interact with remote Web services to download massive data.
* Designed a standard mechanism to interact with WaterOneFlow, a SOAP-based family of web services.
* Expanded the Web-based HydroExploratory System designing a Microservice architecture which includes .NET Core Web API, Framework Web API, Web hooks and System IO Pipes. Added a rich set of functionalities for data curation purposes and integration with R Language. Mentor final users to use the Web API service from within R Language. Designed and implemented programmatically generation of SSRS reports.
* Applied Machine Learning regression, classification and clustering for statistical analysis.
* Integrated the HydroExploratory System with the CUAHSI Web Services.

Itau International, Miami, FL**February 2017 – December 2018**

**Lead Senior Applications Development Analyst**

* Played an instrumental role in the Web-based Anti-Money Laundering project which was delivered successfully in a fast-paced, high-stress and deadline-oriented environment. Migrated data from DB2 to MS SQL Server. Applied Machine Learning algorithms for clustering and classification.
* Designed an advanced architecture prototype based on Microservices for Active Directory Management, Privileged User Control and MS SQL Server alerts. Involved with Web Hooks, System IO Pipes and SignalR.
* Architected and implemented a Web-based dashboard for Cash Movements which was highly praised by final users because of its remarkable responsiveness and throughput. Created reports with MS SQL SSRS.
* Implemented an on-line solution with ASP.Net Core for parsing in parallel Wire Transfer set of excel files with remarkable performance.

ABE-UFL, Gainesville, FL**January 2016 – January 2017**

**Senior Developer and Architect**

* Built the Web-based HydroExploratory System which provides interactive graphical capabilities and data analytics for Hydrology community. Designed and implemented complex Web Interfaces, including GIS Dashboard with Open Layer to improve user experience. Designed SSIS packages to import data and implemented Windows services to launch and schedule packages activity.
* Responsible for conceptualization, design and implementation of a data transfer solution to monitor remote sensor data collection to explore data graphically and discover unexpected insights. Integrated with Hydrobase system heterogeneous source of data provided by Decagon data loggers. Designed and implemented a real time Web-based dashboard to download data from Decagon Services. Introduced new capabilities to the WCF application HBUploader to process data from Decagon System. Added MVC features to a legacy Web Form application.

WASD, Miami, FL**November 2014 – January 2016**

**Senior Developer**

* Instrumental in the Paving-Restoration and Sludge Transportation Web-based Systems which are modernization of legacy Oracle Web- Forms applications migrated into SQL Server 2014. Migrated Oracle databases to MS SQL Server
* Designed UI prototypes to interact with final users. Designed rich Web based interface. Worked heavily with SSRS, MVC, Ajax, AngularJS, JQuery, HTML5 and Web services in .NET Framework 4.5. Redesigned data models. Introduced GIS searching capabilities integrated with SignalR. Designed and implemented SOA functionalities to replace database systems interactions.
* Developed a technology infrastructure plan to interact with Oracle remote servers via SSIS and a SignalR service. Implemented a service to launch Data Transformation Packages with Web-based management capabilities.
* Documented Business Processes for Decision Makers. Modeled with UML the Paving and Restoration System. Designed the upgrading of a MS Access application to MS SQL Server 2014. Managed TFS Activities. Specified Requirements. Assisted entry level developers. Modeled components and class structures with UML.

DESCARTES, Miami, FL**December 2011– November 2014**

**Developer**

* Key member of the core development team for the Federated Application Suite ICS and ECS. Solved complex problems in a real-time high volume transactional multi-tenant database and Service Oriented Architecture/Software-as-a-Service environment. Improved remarkably the scalability of the Web-based ICS system reducing deadlock and race conditions. Fixed many bugs and delivered many new features under tight deadlines for new application releases. Documented with test procedures all assigned tasks and fixed coding bad practices. Implemented many Crystal Report modules.
* Accountable for service implementation in different SOA applications, AIR America, AIR Canada and AIR Mexico. Designed and implemented MVC modules in Wed-based projects.

INDEPENDENT CONSULTANT, Fort Lauderdale/Miami FL**November 2002 – December 2011**

**Senior Developer**

* Designed and implemented new administration and data management features for the Hydrobase System 3.0. Augmented responsiveness and throughput of Web interface. Added new processing capabilities to Remote Uploader enhancing remarkably the performance of the uploading for huge amount of data. Performed DBA duties. Mentored final users.
* Implemented in ASP.NET the Respondus Lockdown Browser API for the Prometric IBT system. Participated as a team member in the SAM project for NCARB. Implemented interoperability between C# and C++ code. Designed and implemented client and server WCF for the Grid Remediation application. Created test plans and decided testing strategies for refactoring and maintenance of legacy applications written in C++.
* Developed the Hydrobase System 3.0. Augmented significantly the throughput and responsiveness of dynamically generated graphs and statistical reports. Provided new capabilities and processing abilities based on new requirements. Architected and implemented a WCF-based application for remote data uploading, which deploys huge amount of data with remarkable performance and robustness.
* Instrumental in the Loxahatchee River Basin project, designed and implemented a multi-tier, WCF based application for data correction, processing and analysis. Designed and implemented strategies for integration of heterogeneous data sources into a central database.
* Main architect and developer of the Hydrobase System 2.0, transforming version 1.0 into a Web-centric set of applications and services oriented to graphical analysis for educational and research purposes. Monitored integration tests and prepared product for deployment. Optimized the design of multithreading processing. Handled successfully the deployment and availability of millions of records. Challenged to enhance performance adding multithreading.
* Accountable for the migration of the Gradience System into Windows Vista Platform which was accomplished with extraordinary success in schedule as well as in the robustness of the architecture and code modifications. Heavily involved with Windows Vista ACL accounts, virtualization and program manifest. Contributed by fixing dozens of bugs to the stability of several legacy applications written in Delphi and Visual C++.
* Instrumental in the Hydrobae System 1.0, which has been praised by the Hydrological community of Florida due to its robustness and remarkable performance. Involved with N-Tier architecture, C# .NET Remoting, HTML, XML, multi-thread programming and stored procedures. Created multidimensional OLAP cubes for data mining. Designed and coded a user front-end for Multidimensional Analysis via ADO MD. Tuned database and implemented the database maintenance plan. Wrote project documentation and User’s Manual. Configured IIS.

EDUCATION

* University of Havana, Post-Graduate Course in Object Oriented Languages,
* Highest Technical Institute, Post-Graduate Course in Applied Statistics, Havana, Cuba.
* Highest Technical Institute, Graduated as Engineer in Geophysics, Havana, Cuba.