## Santiago Gómez Guerrero

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## SUMMARY

* Significant translator experience in the English/Spanish, English/Portuguese and English/Guarani language pairs, having completed many technical, medical and legal job assignments.
* Specialist in Business Intelligence, Data Science, and Database Project Management, with solid skills in systems integration and applications of relational databases.
* Extensive industry experience in top-tier companies, across finance, automotive, power generation, manufacturing, credit unions, education, agriculture, consulting, and government areas.
* Has delivered full systems that support strategic and operational results.
* Strong developer in IBM Datastage • Oracle Warehouse Builder and PL/SQL • Linux • Windows.
* Strong experience in Statistics, Data Analysis and Data Mining, having taught university courses, designed samples, and conducted research.
* Good ability at team working and team mentoring. International experience from work in the United States, Australia, Brazil and Paraguay.

## TECHNICAL EXPERTISE

* Experience in understanding and translating **Requirements** into detailed software **Architecture**, as the initial phase towards the implementation of business and/or scientific computing applications.
* Proficiency in the methodologies of Data modeling, **Database design** and Data migration.
* Excellent **interpersonal skills** for focused interaction with Clients and Users, plus good oral and written communication. Ability to foster Team Work and to mentor his Team Members.
* Strong abilities in the development, deployment, and maintenance of **enterprise data systems**.
* Expertise in developing processes to **extract, transform** and **load** **(ETL**) data from various sources, carrying out project requirements end-to-end from data acquisition through transformation to delivery.
* Experience of 7 years designing and constructing Data Warehousing Systems using **IBM Infosphere DataStage** (Administrator,Designer, and Director) and **Oracle Warehouse Builder** (Control Center, Designer, Enterprise Manager).
* Experience of 13 years in **Analysis, Design, Development,** **Implementation, Maintenance and Performance Tuning** of Relational Databases using the industry's leading database management systems.
* Proven ability to leverage **Linux** and **Windows** for integration and **automation** of systems that receive, convert, store and distribute data across different platforms/environments.
* Very competent in Statistical Profiling, **data analysis** and **data mining.**
* Proven capacity as an academic **researcher,** contributing with original ideas, strengthening the team and following all tasks through completion and publication.

## EXPERTISE WITH HUMAN LANGUAGES

* Professional ability level in English and Portuguese.
* Reading and understanding of Italian and French.
* Bilingual native of Spanish and Guaraní. Both languages are spoken at home.
* Significant experience as English-Spanish, Spanish-English and Portuguese-English translator. Has completed technical, medical and legal job assignments since the mid 1990s. Paraguayan Supreme Court Register #620.

SOFTWARE TOOLBOX

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| --- | --- |
| **ETL** | **Oracle Warehouse Builder 9i/11g • IBM Infosphere Datastage 8.5 • Datastage Administrator, Designer, and Director • Datastage Parallel Extender** |
| **DBMS** | **Oracle 11g**, Microsoft SQL Server, MS-Access, Visual Foxpro |
| **DB Development** | Oracle SQL Developer **•** Benthic Golden **•** TOAD **•** Oracle SQL\*Loader |
| **Modeling** | **Oracle Business Intelligence (EE)**, Power Designer 6.0, Erwin 4.0/3.5 |
| **Languages** | SQL, PL/SQL, C, COBOL, Korn/C Shell Scripting, HTML |
| **Operating Systems** | Windows 7/XP/NT, 98, 95 **•** Linux/Unix **•** MS-DOS |
| **Other Tools** | Memsource Translator, Business Objects, Altova XML Spy, 24x7 Scheduler, WinSCP, ASG Document Direct, MS-Office, Oracle Open Office |

EDUCATIONAL QUALIFICATIONS

* Masters degree in Computer Science – University of North Carolina, Chapel Hill, North Carolina
* Masters degree in Statistics – Iowa State University, Ames, Iowa
* BS in Mathematics – National University of Asunción, Paraguay

WORK EXPERIENCE

**National University of Asunción, San Lorenzo, Paraguay [Since Mar 2014]**

**Lecturer and Researcher**

As a department of the Polytechnic School, the Nidtec (Núcleo de Investigación y Desarrollo Tecnológico) offers postgraduate courses in computer science and conducts research projects with a multidisciplinary approach, emphasizing mathematical modeling, automated image analysis, parallel computation, and bioinformatics.

***Responsibilities***:

* Participation in research, currently leading mathematical modeling work on dengue fever in Paraguay.
* Tutoring of students for undergraduate and postgraduate level theses.
* Planning, preparation and teaching of postgraduate courses in Statistics, Machine Learning, and Business Intelligence.

***Environment*: Knime, R, IBM SPSS, PostgreSQL, Windows 7/10, Linux/Ubuntu.**

**Bank of Hawaii, Honolulu, HI [May 2007 – Sep 2013]**

**Senior Systems Consultant**

The Business Intelligence Delivery group receives, stores and distributes data and reports that empower the institution to maintain a superior level of financial services and customer attention. These data are hosted in local and remote Oracle and SQL Server databases, and many reports are delivered through a document archiving system in compliance with legal requirements. The Bank outsources a large proportion of its core business processes; in addition to that, specific banking and finance areas are served through a combination of internally deployed and externally hosted applications. Inter-application communication both batch and real time gives rise to data loads that execute daily, weekly and monthly under scheduled or triggered jobs, feeding the databases and reports. The Bank's support staff maintains all ongoing running jobs.

***Responsibilities***:

* Designing, developing and maintaining applications in Business Intelligence and Data Warehousing.
* Managing and maintaining a variety of production ETL and database scheduled processes, including Loan Origination, Security Access and Accounts Reconciliation.
* Actively contributing to implement new corporate applications, systems and methodologies.
* Designing and developing during migration to new or updated platforms.
* Providing technical support to users of business intelligence and reports.

***Environment*: Infosphere DataStage 8.5, Oracle Warehouse Builder 9i and 11g, Oracle DBMS 9i and 11g, Java and J2EE, ASG Document Direct 2.3, Windows 7, Linux/Unix shell scripting, and interface to mainframe host.**

**Citrix Systems, Fort Lauderdale, FL [Jan 2007 – Feb 2007]**

**Senior Data Warehouse Developer**

To support analysis of their worldwide operations, Citrix Systems keeps a data warehouse of Commissionable Sales. This Project involves the creation of a reliable and up to data warehouse of sales data. Extract, transform and load (ETL) is performed focusing on the sales, production, distribution and finance areas. In many cases, fact data refers to dimensions that show multiple hierarchies, whose attributes may be slowly changing dimensions (SCDs) of types 1 and 2. Updates to these attributes may even occur within a matter of hours, imposing special requirements on the recording of timestamps and on the management of data.

***Responsibilities***:

* Analyzed and designed the register/tracker of job runs, and then implemented in Datastage.
* Developed and deployed a Datastage template to manage slowly changing dimensions (SCDs) of types 1, 2 and 3.
* Determined the manageability of different date and time format options, under Datastage paired with Microsoft SQL Server. Created functions to handle timestamp arithmetic with a precision of 1 second.
* Wrote functions to handle timestamp arithmetic satisfying a required precision of 1 second.

***Environment*: DataStage 7.5 Server edition, SQL Server 2000, Hyperion, Windows Server, Microsoft Virtual PC, Windows XP Professional.**

**IBM Corporation, San Francisco, CA [Oct 2006 – Jan 2007]**

**Data Stage Consultant**

Gap Inc. is a major IBM client, retailing casual fashion through outlets in all the United States. At the Marketing division, the Data Warehouse supports a variety of tasks with special emphasis on the behavior of orders and sales, the analysis of performance by brand, and the capture of customer data to be used in promotional campaigns.

***Responsibilities***:

* Development/testing of DataStage server and parallel jobs within the team that works for Gap Inc.
* Analysis and design of data extract, transform and load to incorporate the new Customer Loyalty program.
* Design of the Product-Merchandising ongoing process.
* Development and modification of ETL (Extract, Transform and Load) sequences and jobs in the data warehouse.
* Creation of shell scripts to run DataStage jobs and control their interaction with the Oracle database.
* Unit and integration testing of jobs, and tuning them for better performance.

***Environment*: DataStage 7.x Parallel Extender edition, Oracle 9i and 10g, Unix shell scripting, SAS, Windows XP Professional.**

##### RMIT University, Melbourne, Australia [Jul 2000 – Dec 2005] and

##### Melbourne International College, Melbourne, Australia [Jan 2006 – Jul 2006]

Lecturer, Researcher and Consultant

# *Description*:

* Teaching of subjects in the Relational Databases and Programming Languages specialty groups.
* Management of **research projects** at the University, and **consulting projects** with industrial partners of the University.
* Two research projects conducted, which created and tested a more complete **Matrix Approach** to the design of relational databases, with better expression power and easier to teach to database novices.
* Consulting project with successful development and deployment of the **Database for Corrosion Control** in Wing Skins at Boeing Maintenance in Tullamarine, Victoria.
* Team contributor in study and design of **Applications** for administrative/academic purposes.
* Team contributor in two stages of upgrade of course curricula.

***Environment*: Windows NT/2000, Unix, Oracle 8.0 SQL and PL/SQL, Visual Basic, ODBC, MS-Access.**

**CEIP S.R.L., Paraguay [Jan 1998 – Jun 2000]**

**Data Analyst**

***Description*:**

* Design of **Geographic Information Systems**, supervision of map updating (using Atlas GIS)
* Study, design and implementation of applications for company customers, under **System Development Life Cycle** (SDLC) processes.
* Design and conduction of sample surveys and censuses.
* Development of the **GUI** (graphical user interface), involving design of flexible master-detail forms.
* Creation & Maintenance of **Database objects** – in line with the business applications requirements.

##### *Environment*: Oracle 8i, Atlas GIS, Visual Basic, PL/SQL, Windows, Unix.

**IBM Paraguay [Mar 1997 – Dec 1997]**

**Marketing Database Administrator**

***Description*:**

* **Gathering and administration of data** to give a sound foundation to the planning of campaigns
* Co-responsible in developing campaigns and events to promote products and services
* Frequent interaction with South American regional coordinators **monitoring database methodologies**
* Testing of **CRM modules**
* **Cleansing** and input of Marketing data into CRM system
* Maintaining the **Leads Database** of current and potential customers
* Follow-up of best leads, within potential customers and non traditional sectors

##### *Environment*: CRM, Lotus Notes, Windows, OS/2, AIX

**National University of Asunción**, **Paraguay [Jan 1981 – Oct 1986 and Mar 1993 – Dec 1998]**

**Computer Science Professor**

***Description*:**

* Director of the Educational Area in the National Computing Center within the university
* Provided academic, professional and administrative leadership to the Center
* Conducted and implemented a full revision and update of the bachelor’s program
* Taught a variety of courses in the Computer Science and Mathematics academic departments
* Participated in research on Genetic Algorithms and on Digital Seals for Documents
* Liaised with vendors, establishing an interaction between the university and the IT industry

##### *Environment*: NetWare, FoxPro 2.5, SPSS, Quattro Pro, Windows, IBM 5110 Basic.

**Ministry of Education and Culture**, **Paraguay [Jan 1996 – Mar 1997]**

**Database and Statistical Consultant**

***Description*:**

* Investigation on innovations in learning resources, building a **specialized database,** serving the Program for Quality Improvement in Secondary Education.
* Provided technical support in statistics and applications, using **SPSS** and Excel
* Involved in **Application analysis, design and implementation**
* Debugging & testing of modules for acceptance

##### *Environment*: NetWare, FoxPro 2.5, Quattro Pro, SPSS, Windows.

**Ministry of Agriculture and Livestock**, **Paraguay [Jul 1994 – Feb 1996]**

Database Developer and Statistician

***Description* :**

* Analysis of requirements, and creation of the **Coordinated Information System for Rural Development** (SICIDER) as a database application. This information system provides reports to management, on the development status of the rural zones affected by the Rural Settlement Consolidation Project. A database administrator and all end users were **trained** at deployment.
* Maintenance and **Performance Tuning** of the database
* Development and deployment of database applications, and training of users for: **Managerial Reports, Agenda of the Contracts,** and **Official Folder Follow-up.**

##### *Environment*: Lantastic 5.0, FoxPro 2.0, WordPerfect 5.1, Quattro Pro 5.0, MS Project for Win­dows.

**Informática SA,** **Brazil and Paraguay [1988 – 1990 and 1993 – 1994]**

Executive Technical Manager

***Description*:**

* **Identification of projects** with client Itaipú Binacional, owner of the largest hydroelectric power dam in the world.
* Design and presentation of offered solutions; participation in negotiations.
* **Monitoring** of Human Resources, Vehicle Maintenance, and Work in Progress Databases for the client.
* Development manager for a **full banking system** project in Oracle for Banco Paraguayo-Alemán.
* Situational analysis to identify customer projects suitable for outsourcing.
* Liaising for and **negotiating prior to service agreements** with vendors and clients.
* Coordination of the execution of projects, including the monitoring of budgets and schedules.

***Environment*:** **NetWare, Unix, Xenix, Oracle, FoxPro, Foxbase, WordPerfect, Quattro Pro, MS Project.**

**Electronic Data Systems**, **Melbourne, Australia [Dec 1990 – Feb 1993]**

Senior Systems Engineer and LAN Administrator

***Description*:**

* Maintained a high level of **interaction with customers**, doing the analysis of requirements, preparation of proposals and the deployment of adopted solutions.
* **Liaised with vendors** and evaluated PC equipment and softwareto be purchased.
* Successfully installed the **upgrade and expansion of a network** server on site at client General Motors-Holden (Elizabeth). Planned, supervised and implemented all technical requirements in that network, with nearly zero network downtimeduring the upgrade.
* Installed hardware and software at a Novell Netware network for client United Australian Automotive Industries (Melbourne).
* **Maintained three local area** networks: General Motors-Holden (Melbourne), General Motors-Holden (Factory in Elizabeth, South Australia) and Electronic Data Systems (Melbourne).
* **Supported LAN and standalone PC users** through installation, configuration and testing of new hardware and software; application support; and first-level determination of hardware faults.
* Displayed high talent for developing work plans and setting priorities for installation.
* Identified capabilities, relating to customers and getting their feedback.

##### *Environment*: Novell NetWare 2.15, WordPerfect 5.1, Lotus 3.1, Word for Windows, Harvard Graphics, Clipper, Project Management Workbench, Carbon Copy, IBM TSO.

SELECTED PROJECTS AS A TRANSLATOR

**National University of Asunción, San Lorenzo, Paraguay**

**Revision and translation of academic papers, Spanish to English** [Completed Dec 2020]

At the request of colleagues, several papers written by Paraguayan scientists were reviewed and translated, and later published in refereed journals. Work volume, about 90 days. Two examples can be viewed at:

<https://www.hindawi.com/journals/cmmm/2019/7307803/?utm_medium=author&utm_source=Hindawi>

<https://drive.google.com/open?id=1Y04xg1apST6HZ6kRBWVDiWcho2_3Xw9E>

*Keywords:* Epidemiology; Machine learning; Modeling; Statistics; Correlation

**iDisc, Barcelona, Spain**

**Facebook localization for Paraguay, English to Guarani** [Completed Aug 2014]

Intended to offer a friendlier Facebook to speakers of Guarani. Was part of team of 3 translators. Work volume, about 60 days. Supervised by: fmorello@idisc.es

*Keywords:* Social media; Indigenous languages; Localization; Privacy

**Antelco (state-owned phone provider in Paraguay)**

**250 Telecom technical papers and reports translated, Spanish to English** [Completed May 1995]

Work was done in the context of the Latin American Conference on Telecommunications, held in Asunción, Paraguay, in April 1995. Was part of a team of 6 translators. Work volume, 40 days.

*Keywords:* Telecommunications; Computers; Messaging across borders; Communications management

RESEARCH PAPERS

* *Classifying Dengue Cases using CatPCA in combination with the MSU Correlation* (Santiago Gómez, Emilio G. Sotto, Gustavo Sosa, Christian Schaerer and Miguel García). A minimal size prediction model is built by combining the categorical principal components analysis with the new MSU correlation measure. Presented at the Entropy 2021 Conference, Porto, Portugal, 2021.
* *A Multivariate approach to the Symmetrical Uncertainty Measure: Application to Feature Selection Problem* (Gustavo Sosa, Santiago Gómez, Christian Schaerer, Miguel García and Federico Divina). This article specifies, characterizes and tests the MSU multivariate correlation measure. Published by Elsevier in its Information Sciences journal, volume 494, Duivendrecht, Netherlands, 2019.
* *Effect of Sample Representativeness in Multivariate Symmetrical Uncertainty for Categorical Attributes* (Gustavo Sosa, Santiago Gómez, Christian Schaerer, Miguel García and Federico Divina).A new entropy-based, multivariate measure of correlation for nominal variables is presented, with a study of its characteristics and its potential. Presented at BAFI (Business Analytics in Finance and Industry) 2018 conference, Universidad de Chile. Santiago, Chile, 2018.
* *Estimating Seasonal Parameters under the Discrete Sales Prediction Model with Seasonality* (Claudia Montanía, Santiago Gómez and Christian Schaerer).Working on a recently proposed sales prediction model with seasonality, a methodology is presented to estimate the seasonality parameters , thus completing usability of this combined model. Presented at BAFI (Business Analytics in Finance and Industry) 2015 conference, Universidad de los Andes. Santiago, Chile, 2015.
* *Learning Databases with the Design Matrix Approach* (Santiago Gómez, Hoang Duong and George Fernández).Measuring effectiveness of learning of relational database design techniques employing with the new Design Matrix, as compared to the traditional entity-relationship diagram. Paper presented within the Action Research in Teaching & Learning program at RMIT University. Melbourne, Australia, 2005.
* *Towards a Schema Representation through Design Matrices* (Santiago Gómez and Hoang Duong). A new approach to relational database design that offers more expressive power than diagrams. Presented at the Australian Software Engineering Conference. Brisbane, Australia, 2005.
* *Matrix Apriori: Speeding Up the Search for Frequent Patterns* (Judith Pavón, Sidney Viana and Santiago Gómez). Matrix structures and algorithms applied to the generation of frequent patterns in data mining. Proceedings of the 24th IASTED International Multi-Conference on Databases and Applications. Innsbruck, Austria, 2006.
* *Steganographic Watermarking for Documents* (Santiago Gómez, Benjamín Barán and Víctor Bogarín). Two approaches to sealing hidden messages inside a document file, with a working prototype. Presented at the 34th Hawaii International Conference on System Sciences. Maui, USA, January 2001.
* *Digital Seals for Documents* (Santiago Gómez, Víctor Bogarín and Benjamín Barán). Continuation of research done at the Universidad Nacional, working as project leader. Presented at the 25th CLEI Conference. Asunción, September 1999.
* *Aggregates in the Temporal Query Language TQuel* (Richard Snodgrass, Santiago Gómez and E. McKenzie). Generalization of the concepts introduced in “A formal semantics for aggregates in TQuel”. IEEE Transactions on Knowledge and Data Engineering, Vol. 5, No. 5, October 1993.
* *Costos de P productos obtenidos a partir de N insumos en situaciones fabriles no rutinarias.* An application of matrix algebra and statistical methods to calculation of costs in cuasi repetitive processes. Presented at the CITA 93 computing conference. Asunción, August 1993.
* *A Formal Semantics for Aggregates in TQuel.* Original research in completion of the Master of Science in Computer Science. To extend the TQuel language with time-oriented aggregates, this work provided the necessary semantics usable in real implementations. University of North Carolina, Chapel Hill, USA, 1985.
* *Bases de Datos Temporales.* Paper based on work done at the University of North Carolina. Presented at the Informatics Meeting, Catholic University, Asunción, 1984. Published on No. 3 of the Revista Paraguaya de Informática, June, 1985.
* *Dos Algoritmos en Basic para la Clasificación de Archivos* (Santiago Gómez and Mario Riveros). Presented at the Informatics Meeting, Catholic University, Asunción, 1977.
* *Minimizing the Maximum Absolute Deviation.* A geometric algorithm for linear regression using the minimax criterion, presented as research component for the Master of Science degree in Statistics. Iowa State University, Ames, USA, 1975.

REFERENCES: Available upon request.

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