

JORGE IVÁN RODRÍGUEZ ECHEVERRÍA

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Ghent 9000 Belgium

EDUCATION

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|------------|---|--------------------|
| PhD | Ghent University
PhD computer science engineering
Student
Advisor: Sidharta Gautama, prof. dr. ir. | May 2016 - Present |
| MS | Escuela Superior Politécnica del Litoral
Master in Management Information Systems
Thesis: “Designing methodology for data migration between critical applications in the Guayaquil’s town hall”
Advisor: Lenin Freire, Msig. | Dec 2012 |
| BS | Escuela Superior Politécnica del Litoral
Computer engineer specialized in technological systems | Jul 2007 |

RESEARCH EXPERIENCE

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|---|---------------------|
| Researcher (Contract Position)
Ghent University, Department of Telecommunications and Information, Ghent, Belgium | May 2016 – Sep 2018 |
| Researcher (Contract Position)
Ghent University, Department of Industrial System Engineering, Ghent, Belgium | Oct 2018 – present |

PUBLICATIONS

Journal Publications

- Jorge Rodríguez, Ivana Semanjski, Sidharta Gautama, Nico Van de Weghe, Daniel Ochoa: Unsupervised Hierarchical Clustering Approach for Tourism Market Segmentation Based on Crowdsourced Mobile Phone Data. *Sensors* 09/2018; 18(9):2972., [DOI:10.3390/s18092972](https://doi.org/10.3390/s18092972)
- Rodriguez Echeverría, J., Semanjski, I., Van Gheluwe, C., Ochoa, D., IJben, H., & Gautama, S. (2020). Density-based spatial clustering and ordering points approach for characterizations of tourist behaviour. *ISPRS INTERNATIONAL JOURNAL OF GEO-INFORMATION*, 9(11). <https://doi.org/10.3390/ijgi9110686>

Conference Proceedings

- Rodríguez-Echeverría, J., Gautama, S., Van de Weghe, N., Ochoa, D., & Ortiz-Jaramillo, B. (2018). Efficient Use of Geographical Information Systems for Improving Transport Mode Classification. In DATA ANALYTICS 2018, The Seventh International Conference on Data Analytics (pp. 130–135). Athens, Greece.
- Rodríguez-Echeverría J., Gautama S. and Ochoa D., "A methodology for train trip identification in mobility campaigns based on smart-phones," 2017 IEEE First Summer School on Smart Cities (S3C), Natal, 2017, pp. 141-144.
- Oswaldo Pita, Gabriela Baquerizo, Carmen Vaca, Jonathan Mendieta, Monica Villavicencio, and Jorge Rodriguez: Linguistic profiles on microblogging platforms to characterize political leaders: The Ecuadorian case on Twitter. 2016 IEEE Ecuador Technical Chapters Meeting (ETCM); 10/2016, [DOI:10.1109/ETCM.2016.7750870](https://doi.org/10.1109/ETCM.2016.7750870)

AWARDS & GRANTS

Scholarship: Flanders Innovation & Entrepreneurship May 2016
Project: FLAnders Mobile ENacted Citizen Observatories (FLAMENCO)

TEACHING EXPERIENCE

Escuela Superior Politécnica del Litoral, Guayaquil, Ecuador May 2008 to Apr 2016
Professor, Electric and Computing Engineering Faculty

- Taught Programming Fundamentals, an undergraduate course averaging 30 students per semester, covering the following topics: C Programming, structure programming, functions, arrays, libraries, pointers, characters and string, files. Developed quizzes, exams, and homework. May 2008 to Sep 2011
- Taught Object-Oriented Programming, an undergraduate course averaging 60 students per semester, covering the following topics: Java Programming, object-oriented programming, object-oriented analysis and design, user interface design. Developed quizzes, exams, and homework. Checking the syllabus to cover accreditation standards. Coordinated grading and labs with a team of 3 professors. Oct 2010 to Sep 2014
- Taught Database Systems I, an undergraduate course averaging 20 students per semester, covering the following topics: modeling database, normalization, Transact SQL, PL/SQL May 2011 to Sep 2013
Developed quizzes, exams, and homework.

- Taught Web Applications Development, an undergraduate course averaging 35 students per semester, covering the following topics: web standards, client-side and server-site programming, web architectures, web services, MVC model, state management, web security. Oct 2011 to Feb 2016
Developed quizzes, exams, and homework.
Checking the syllabus to cover accreditation standards.
- Taught Data Structures, an undergraduate course averaging 30 students per semester, covering the following topics: data types, data structures: list, stack, queue, map, trees, graph. May 2013 to Feb 2016
Developed quizzes, exams, and homework.
Checking the syllabus to cover accreditation standards.
Coordinated grading and labs with a team of 2 professors.

Undergraduate Students Advised

- Carla Salvatierra, Felix Rivas, “Social web application for labeling fragments of Youtube videos applying the concept of games with a purpose”. Jul 24, 2013
- Carla Hurel, Andrea Caceres, “Android application that used wi-fi technology to guide students to their classrooms in ESPOL”. May 20, 2015

PROFESSIONAL EXPERIENCE

Inspector of Use Cases National System Public Finance (Contract Position)

ESPOLTECH, Guayaquil, Ecuador

Nov 2013- Mar 2014

Description: The inspection was performed to detect and classify the different types of errors in the system requirement’s definition, to correct them and performing the software measurement process.

Land Use System development (Contract Position)

M.I. Municipalidad de Guayaquil, Guayaquil, Ecuador

2012

Description: By this system, citizens can check their property's land use. The system was developed in ASP.NET and deployed at November 2012.

<https://tramites4.guayaquil.gob.ec/usodesuelos/Consultas/SUS00001.aspx>

Senior software developer

M.I. Municipalidad de Guayaquil, Guayaquil, Ecuador

2008 - 2010

Description: Application Developer (Web and Windows) using .NET platform in Guayaquil's town hall.

Machine Learning with Big Data

University of California, San Diego. Coursera. May 4th, 2017

Description: Design an approach to leverage data using the steps in the machine learning process. Apply machine learning techniques to explore and prepare data for modeling. Identify the type of machine learning problem to apply the appropriate set of techniques. Construct models that learn from data using widely available open-source tools. Analyze big data problems using scalable machine learning algorithms on Spark.

Introduction to Big Data

University of California, San Diego. Coursera. March 21st, 2017

Description: Identify what are and what are not big data problems. Architectural components and programming models used for scalable big data analysis. Install and run a program using Hadoop.

Getting started with High-Performance Computing 2016

Ghent University, Belgium. Jun 2016

Description: Introduction to the UNIX command line, scripting, and high-performance computing (HPC) as a steppingstone towards the use of computer clusters for solving advanced computation problems. Python scripting. Introduction to Python. Scientific computing with pylab: numpy, scipy, matplotlib, and Jupyter-Notebook.

Data analysis tools

Wesleyana University, Coursera. Jun 14, 2016

Description: develop and test hypotheses, variety of statistical tests (ANOVA, Chi-Square, and Pearson correlation analysis), strategies to know how to apply them, use of statistical software packages (Python).

Data management and visualization

Wesleyana University, Coursera. Oct 12, 2015

Description: Manage, describe, summarize, and visualize data, choose a research question based on available data and engage in the early decisions involved in quantitative research, describe variables and their relationships through frequency tables, calculate statistics of center and spread, and create graphical representations.

Microsoft SQL Server 2012 Business Intelligence

SIPECOM, Padre Aguirre / Malecón 2000, Guayaquil, Ecuador. Oct 12, 2015

Description: Creating ETL process using Integration Services, OLAP cubes using Analysis Services and reports with Reporting Services.

Geographic information systems and infectious diseases

Upstate Medical University and ESPOL. Ago 2014

Description: Using QGIS like tool to show cases of dengue on a map

Web applications development ASP.NET MVC4

SIPECOM, Padre Aguirre / Malecón 2000, Guayaquil, Ecuador. May 2014

Android mobile applications

Microsoft Academy – ESPOL, ESPOL. Feb 2013

LANGUAGES

English: Intermediate listener, speaker, reading and writing

Spanish: Native Language

Portuguese (BR): Intermediate listener and speaker, reading and writing. Celpe-Bras Intermediate Certification, April 2014.

Dutch: Learning (beginner).

COMPUTER SKILLS

Programming: C#, Java, Python, ANSI C, ASP.NET, Transact-SQL, PL/SQL

Applications: Spyder, Microsoft Visual Studio, MATLAB, MySQL, NetBeans, Apache Spark

Platforms: Windows, Linux

REFERENCES

Dr. Daniel Ochoa, Mr.

Electric and Computing Engineering Faculty

Escuela Superior Politécnica del Litoral

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Dr. Ana Tapia, Miss.

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