



VÍCTOR MARTÍNEZ GÓMEZ

Ph.D. • Computer Engineer • Data Scientist

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Currently living in Madrid, Spain • Born in 1989

EDUCATION

- 2014-2018** **Ph.D. Degree in Data Science**
University of Granada
Grade: cum laude
Ph.D. thesis in network data mining, focusing on the development of new link prediction techniques and related applications in fields such as natural language processing or bioinformatics.
- 2013-2014** **Master's Degree in Soft Computing and Intelligent Systems**
University of Granada
Grade: 9.65 out of 10
University master's degree in machine learning and artificial intelligence, including deep learning/neural networks, probabilistic reasoning, fuzzy logic, and evolutionary algorithms.
- 2007-2013** **Computer Engineering**
University of Granada
Grade: 7.76 out of 10
Five-year university degree in computer engineering. Capstone project on a web server tool for candidate gene prioritization.

PROJECTS







- 2014-2018** **NOESIS**
Java <http://noesis.ikor.org/>
Network data mining framework that provides a large collection of network analysis techniques, including parallel implementations of link prediction and community detection techniques.
- 2018** **NOESIS for Python**
Python <https://github.com/fvictor/noesis-python>
Python API for the NOESIS framework that provides access to numerous network-related algorithms for Python programmers.
- 2017** **TUORIS**
Javascript <https://github.com/fvictor/tuoris>
Node.js
Middleware for distributed SVG visualization in scalable tiled display walls, especially suited for visual representation of big data.
- 2012-2013** **ProphNet • DrugNet**
Python <http://genome.ugr.es>
MATLAB
JavaScript
HTML/CSS
Tools, based on novel algorithms, for the prediction of candidate genes for complex diseases and new uses for existing drugs.

More projects in my GitHub profile

LANGUAGES

English Proficient
Spanish Native

EXPERIENCE

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Since 2018
Amazon
Applied scientist
Application of data analysis, big data, and machine learning to improve Amazon's catalog quality.
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Since 2014
University of Granada
PhD student
Research and development of new machine learning techniques and applications for network data from different domains. Implementation of a large number of link prediction algorithms. Publication of scientific papers in top research journals.
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2017
Imperial College London
Visiting research fellowship
Study and development of new tools based on standard web technologies for large-scale data visualization at the Global Data Observatory (GDO) of the Data Science Institute (DSI).
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2014
Real-Time Innovations
Software developer intern
Development of the new template-based system for the RTI code generator, called *rtiddsgen*. The new system streamlines code generation for new hardware platforms. Corrective maintenance of other components within the RTI DDS suite.
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2012-2013
University of Granada
Research assistant
Study and development of a new machine-learning-based methodology, which integrates heterogeneous data, for the repositioning of existing drugs under the project "Approach to Genetic Networks related to Diseases through Artificial Intelligence".
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2011-2012
University of Granada
Research scholarship
Research and design of a novel method for the prediction of candidate genes associated to complex diseases using network analysis and machine learning.

SKILLS

Data mining • Machine learning • Artificial intelligence

data preprocessing • classification • regression • clustering • anomaly detection • recommender systems • deep learning • network analysis • natural language processing

Theoretical and applied knowledge, with capacity to design new machine learning algorithms.

Business intelligence

data visualization (D3.js, Bokeh) • big data (Spark)

Programming languages

Python • Java • C/C++ • HTML • CSS • JavaScript

Software libraries

NumPy • SciPy • Pandas • Matplotlib • Scikit-learn • Keras

Databases

SQL (Oracle, MySQL, SQL Server) • NoSQL (MongoDB)

Computer science

algorithm design • data structures • parallel and distributed processing • complexity analysis

Software development

software design • design patterns • object-oriented programming • testing • user interfaces • version control tools (GIT, SVN)

CERTIFICATIONS

2018 Advanced Python for Science and Engineering

Doctoral School of Sciences, Technologies and Engineering, University of Granada
Completed with "distinction".

2017 Machine Learning

Coursera, Stanford University, Andrew Ng
Grade: 98.4%.

2017 Entrepreneurial Route

Research Transfer Office, University of Granada
Completed with "distinction".

2014 Social and Economic Networks: Models and Analysis

Coursera, Stanford University, Matthew O. Jackson
Grade: 87.4%.

2013 Advanced Python Programming

UGR General Foundation and Cevug
Completed with "distinction".

2012 Introduction to Python Programming Language

UGR General Foundation and Cevug
Completed with "distinction".

PUBLICATIONS

2019 NOESIS: A framework for complex network data analysis

DOI 10.1155/2019/1439415
Complexity

2017 A survey of link prediction in complex networks

DOI 10.1145/3012704
ACM Computing Surveys

2017 ProphTools: General prioritization tools for heterogeneous biological networks

DOI 10.1093/gigascience/gix111
GigaScience

2016 Adaptive degree penalization for link prediction

DOI 10.1016/j.jocs.2015.12.003
Journal of Computational Science

2015 DrugNet: Network-based drug-disease prioritization by integrating heterogeneous data

DOI 10.1016/j.artmed.2014.11.003
Artificial Intelligence in Medicine

2014 ProphNet: A generic prioritization method through propagation of information

DOI 10.1186/1471-2105-15-S1-S5
BMC Bioinformatics

CONFERENCES

2017 Probabilistic local link prediction in complex networks

DOI 10.1007/978-3-319-67582-4_28
International Conference on Scalable Uncertainty Management (SUM)

2015 The NOESIS open source framework for network data mining

DOI 10.5220/0005610103160321
International Conference on Knowledge Discovery and Information Retrieval (KDIR)

2013 Network-based drug-disease relation prioritization using ProphNet

ISBN 978-84-15814-13-9
International Work-Conference on Bioinformatics and Biomedical Engineering (IWBBIO)

2012 Network-based gene-disease prioritization using ProphNet

DOI 10.14806/ej.18.B.543
International Workshop on Network Tools and Applications in Biology (NETTAB)