



VÍCTOR MARTÍNEZ GÓMEZ

Computer Engineer • Data Scientist

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Currently living in Granada, Spain • Born in 1989

EDUCATION

Since 2014 **Doctor's Degree in Supervised Data Mining in Network Data**

University of Granada

Thesis defence scheduled for September
A four-year PhD thesis in network data mining, focusing on the development of new link prediction techniques and novel applications to solve real-world problems.

2013-2014 **Master's Degree in Soft Computing and Intelligent Systems**

University of Granada

Grade: 9.65 of 10
A one-year university master's degree in machine learning and artificial intelligence.

2007-2013 **Computer Engineering**

University of Granada

Grade: 7.76 of 10
A five-year university degree in computer engineering.

PROJECTS

Since 2014 **NOESIS**

Java

<http://noesis.ikor.org/>
A framework for network data mining that provides a large collection of parallelized network analysis techniques, such as link prediction and community detection.

2018 **NOESIS for Python**

Python

<https://github.com/fvictor/noesis-python>
A Python API for the NOESIS framework that provides access to a large number of network-related algorithms.

2017 **TUORIS**

Javascript
Node.js

<https://github.com/fvictor/tuoris>
A middleware for SVG distributed visualization in scalable resolution tiled display walls, especially suited for the visual representation of big data.

2012-2013 **ProphNet • DrugNet**

Python
MATLAB
JavaScript
HTML/CSS

<http://genome.ugr.es>
Tools, based on novel algorithms, for the prediction of candidate genes associated to complex diseases and new uses for existing drugs.

More projects in my GitHub profile

LANGUAGES

English

Upper-intermediate

Spanish

Native

EXPERIENCE



Since 2014

University of Granada

PhD student

Four years researching and developing new machine learning techniques and applications for network data from different domains. Implementation of a large number of algorithms and evaluation experiments. Writing of several scientific publications, which were published in high-impact scientific journals.



2017

Imperial College London

Visiting research fellowship

Four months as visiting researcher at the Data Science Institute, part of Imperial College in London, where I studied and developed new tools for large-scale data visualization on their Global Data Observatory (GDO).



2014

Real-Time Innovations

Software developer intern

Six months developing the new template-based system for the RTI code generator, called *rtiddsgen*. The new system replaced the old one and is facilitating the generation of code for new hardware platforms. I also fixed several pending bugs in other components.



2012-2013

University of Granada

Hired researcher

Eleven months studying and developing a new machine learning-based methodology for drug repositioning under the project "Approach to Genetic Networks related to Diseases through Artificial Intelligence". The results were published in a scientific journal and motivated further research.



2011-2012

University of Granada

Research fellow

Eleven months researching and designing a novel method for the prediction of candidate genes associated to complex diseases using machine learning. The results were published in a peer-reviewed journal and presented in international congresses.

SKILLS

Data mining, machine learning, and 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 • big data (with PySpark)

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

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

Databases
SQL • 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)

CERTIFICATIONS

2018 Advanced Python for science and engineering
Doctoral School of Sciences, Technologies and Engineering, University of Granada
12 hours course completed with “distinction”.

2017 Machine learning
Coursera, Stanford University, Andrew Ng
Achieved a grade of 98.4%.

2017 Entrepreneurial route
Research Transfer Office, University of Granada
24 hours course completed with “distinction”.

2014 Social and economic networks: models and analysis
Coursera, Stanford University, Matthew O. Jackson
Achieved a grade of 87.4%.

2013 Advanced Python programming
UGR General Foundation and Cevug
30 hours course completed with “distinction”.

2012 Introduction to Python programming language
UGR General Foundation and Cevug
30 hours course completed with “distinction”.

PUBLICATIONS

2017 A survey of link prediction in complex networks
ACM Computing Surveys

2017 ProphTools: General prioritization tools for heterogeneous biological networks
GigaScience

2016 Adaptive degree penalization for link prediction
Journal of Computational Science

2015 DrugNet: Network-based drug-disease prioritization by integrating heterogeneous data
Artificial Intelligence in Medicine

2014 ProphNet: A generic prioritization method through propagation of information
BMC Bioinformatics

CONFERENCES

2017 Probabilistic local link prediction in complex networks
International Conference on Scalable Uncertainty Management (SUM)

2015 The NOESIS open source framework for network data mining
International Conference on Knowledge Discovery and Information Retrieval (KDIR)

2013 Network-based drug-disease relation prioritization using ProphNet
International Work-Conference on Bioinformatics and Biomedical Engineering (IWBBIO)

2012 Network-based gene-disease prioritization using ProphNet
International Workshop on Network Tools and Applications in Biology (NETTAB)
