VÍCTOR MARTÍNEZ GÓMEZ

Ph.D. Candidate • Computer Engineer • Data Scientist

victormartinezgomez1989@gmail.com • https://github.com/fvictor
Currently living in Granada, Spain • Born in 1989

EDUCATION

Since 2014 — University of Granada
Ph.D. Degree in Data Mining
Thesis defence scheduled for September
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 — University of Granada
Master's Degree in Soft Computing and Intelligent Systems
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 — University of Granada
Computer Engineering
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

Since 2014 — *Java*
NOESIS
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 — *Python*
NOESIS for 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 — *Javascript Node.js*
TUORIS
https://github.com/fvictor/tuoris
Middleware for distributed SVG visualization in scalable tiled display walls, especially suited for visual representation of big data.

2012-2013 — *Python MATLAB JavaScript HTML/CSS*
ProphNet • DrugNet
http://genome.ugr.es
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

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. Realization of several empirical evaluation experiments to measure the performance and robustness of different machine learning techniques. Application of link prediction techniques to natural language processing problems. Publication of scientific papers in top research journals.

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).

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.

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"*.

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

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)