Carlos **López Roa**

Technologist, Data Scientist, Entrepreneur

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languages
Spanish / Native
English / TOEFL
French / A1
German / A1

programming
C, R, Java, Python
Bash, SQL, XML
CSS, HTML & JS, PHP
Matlab, ♥ Mathematica
Prolog, Arduino &
Processing
Assembler, Logo
LATEX, BibTEX

mathematics
Complex & real analysis
Linear algebra
Multivariable calculus
Superior algebra
Ordinary & Partial
Differential Equations
Statistics & Probability
Functional analysis
Finite element analysis
Wavelet Analysis
Dynamical Systems

data science
Convex optimization
Factorial Analysis
Classification
Clustering
Text Mining & NLP
Association Rules
Regression
Decision Trees
Neural Networks
Support Vector
Machines

interests

Data mining, Machine Learning, Big Data analytics, Mathematical modeling, Cloud computing, Internet of things, Sensorgrid, Computer simulation, Artificial Intelligence, Web Mining, Embedded systems

education

09/15-08/17	**M.Sc.** Data Mining and Knowledge Management	Universite Lumiere Lyon 2, Lyon, FR
10/09-04/14	**B.Sc.** Technology	Center of applied Physics and advanced Technology, UNAM, Qro, MX

Bubble dynamics subject to novel shockwave: High speed video
summa cum laude, top 3 best GPA 2011, 2012, P.L. 08807255

experience

02/15-08/15	**Dattlas - Kio Networks**	Data Scientist

Keywords: Big Data, SAP HANA, Business Intelligence
Projects: Televisa

06/14-01/15	**Prosciana**	Director of Technologic development

Keywords: Big Data, Cloud Computing, Internet of Things, Web Services
Projects: K13 | Alarmex | TopCar | Ultralam | Moringa | Lehvi | deconb | Britcan

01/14-06/14	**Vintalent Solutions**	Data miner

Keywords: Web Services, Data Mining

08/12-07/13	**G&C Consultoría**	Statistical programmer

Keywords: Web Services, Statistical Analysis
Projects: UAQ Chemistry | UAQ Nutrition | UAQ Engineering | UAQ Psychology

technical skills

Big Data Analytics using Apache Hadoop, Apache Spark and SAP HANA.

In memory database management using Key-Value data stores in Redis.

Expertise running multiple instances and services in the Amazon Web Services cloud: EC2, RDS, S3, DynamoDB, EMR, SES

Extensive ability in mathematical modelling, numerical simulations and computer assisted symbolic calculus.

Analogical electronics abilities. Microcontroller programming and implementation.

Embedded Systems: Software and hardware development with Microchip PIC family, Arduino platform, Raspberry Pi and Texas Instrument Launchpad

Most common productivity tools on Windows, OS X, Linux desktop and Linux servers

extra courses

- Introduction to Databases - Stanford University - Coursera
- Data Science Specialization - Johns Hopkins University - Coursera
- R Programming - Johns Hopkins University - Coursera
- Machine Learning - Stanford University - Cousera
- Machine Learning Foundations - University of Washington - Coursera
- II Multidisciplinary mathematical Workshop on applications to other sciences, Mathematics Institute, UNAM, Juriquilla, Querétaro, 24 hours, 2014
- IX Mathematics Summer School, Mathematics Institute, UNAM, Cuernavaca, Morelos. 40 hours, June 2012
- XXVII Víctor Neumann-Lara Colloquium in Graph and Combinatorial Theory and its Applications, Tlaxcala, Tlax., 32 hours, March 2012
- Mathematics Summer School in Querétaro, Center for Innovation in Mathematics, Querétaro, Qro, 54 hours, June 2011

social service

Research internship in the Shockwave Laboratory in CFATA-UNAM, 520 hrs.

2014 Gustavo Baz Prada award for the most impacting social service

publications

- López-Roa, C., Perez, L.E., Pedroza, J.C., Icaza, M. de, Castano, V.M.: *Mitos y realidades sobre la situación de los recursos hídricos*, (2010). A.M Newspaper., Section *Ciencia hoy*, April 24, 2010.
- Perez-Margay, L.E., López-Roa, C., Pedroza, J.C., Icaza, M. de, Castano, V.M.: *Optimización y aprovechamiento de los recursos hídricos.* Memorias del V Coloquio en Tecnología. p. 207. Universidad Nacional Autónoma de México, (2010). ISBN: 978-607-02-1439-4
- López-Roa, C., Aragón, J.L.: *Programación de Álgebras de Clifford en Mathematica*. Memorias del sexto coloquio de Tecnología. Universidad Nacional Autónoma de México (2012). ISBN: 978-607-02-3655-6
- López-Roa, C., Vargas, A.: *Control robusto de biorreactores basado en modos deslizantes.* Memorias del octavo coloquio de Tecnología. Universidad Nacional Autónoma de México (2012). ISBN: 978-607-02-3654-9
- López-Roa, C., Santamaría-Holek, I.: *Análisis dinámico del oscilador salino*. Memorias del noveno coloquio de Tecnología. p. 105. Universidad Nacional Autónoma de México. (2012). ISBN: 978-607-02-3943-4