

## Diego Garcia-Olano

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### EDUCATION

*The University of Texas at Austin - Austin, Texas*

Beginning PHD in Decision, Information, and Communications Engineering (DICE) track within Electrical and Computer Engineering in the Fall of 2017.

Advisor: Dr. Joydeep Ghosh. Intelligent Data Exploration & Analysis Lab <http://ideal.ece.utexas.edu/>

Currently taking Probability and Stochastic Processes, Deep Learning Seminar, and TAing Dr. Ghosh's course on Advanced Predictive modeling

*Universitat Politècnica de Catalunya - Barcelona, Spain*

Masters in Innovation and Research in Informatics (graduated: 07/2015)

- Data Mining Specialization

Thesis funded project with LARCA / DAMA research groups, "Automated Construction & Analysis of Political Networks via open government & media sources" [www.whoyouelect.com/texas](http://www.whoyouelect.com/texas)

Additional research with Professor Lluís Belanche for European wide aquavalens.org project

Coursework: Algorithmic Methods for Mathematical Models, Statistical Modelling and Design of

Experiments, Concurrent & Distributed Systems, Multivariate Analysis, Machine Learning,

Statistical Natural Language Processing, Advanced Statistical Modeling, Information Retrieval,

Bioinformatics and Statistical Genetics, Algorithms for Data Mining, Data Stream Mining Seminar.

Attended lectures for Bayesian Statistics, Advanced ML and Complex & Social Networks.

*The University of Texas at Austin (3.86 GPA of 4) Austin, Texas*

Computer Science (B.A., 05/2004) Graduated with Honors

Hispanic Studies (B.A., 05/2004) Graduated with Honors

Government (B.A., 05/2005) (4.0 GPA) with minor in: Business

*Universidad de Sevilla, College of Arts & Letters (Filología) Sevilla, Spain; fall 2002*

*Institut Catholique de Toulouse, Institut de Langue, Toulouse, France; 03/2012 - 06/2013*

### Selected Papers & Presentations

- Network Science Institute at Northeastern University, 10/2016: "Whoyouelect.com" technical talk. <http://www.networkscienceinstitute.org/events/diego-garcia-olano>
- European Conference on Machine Learning. ECML SoGood workshop, 09/2016, Riva del Garda, Italy: "Automated Construction & Analysis of Political Networks". <https://sites.google.com/site/ecmlpkdd2016sogood/>
- Data Science For Social Good Datafest, 08/2016, Chicago: "Enhancing the Distribution of Social Services in Mexico", <https://dssg.uchicago.edu/data-science-for-social-good-conference/>
- Chicago City Data User Group Meetup @ Microsoft Tech Center, 08/2016
- Data visualization d3 teachout, UChicago: <https://github.com/jonkeane/data-visualization-intro/>
- Sedesol, 07/2016, Mexico City: (j) DSSG project overview, (ii) D3/QGis tutorial ( spanish )
- Simultech. 06/2015, Colmar, France: Special Session on Applications of Modeling and Simulation to Climatic Change and Environmental Sciences. "Term-frequency Inverse Document Frequency for the Assessment of Similarity in Central and State Climate Change Programs: An Example for Mexico" with Ivan Paz-Ortiz & Carlos Gay-García. <http://diegoolano.com/ivanpaz/>

- Graph-based Technologies and Applications Conference, 03/2015. Barcelona, Spain. "Use of graph technologies for political analysis". Presented
- Aquavalens Project meeting, 11/2014. Alicante, Spain. "WP5: Preliminary analysis of the Aquavalens matrix with ICHNAEA® software for Microbial Source Tracking". <http://bit.ly/2eDp9ga>
- "Understanding US counties: Clustering and Classification over voting, socio-economic and public health", Predicting Blue Islands in the US. Paper/Code/viz: <http://diegoolano.com/electionmap>

Additional Conferences/Workshops/Summer Schools Attended:

- NetSci, 05/2015, Zaragoza, Spain.
- Machine Learning Summer School, 01/2015. Austin, Texas
- 6th International Conference on Social Informatics, 11/2014. Barcelona, Spain
- Predictive APIs conference, 11/2014. Barcelona, Spain
- Machine Learning Summer School, 07/2014. Lisbon, Portugal
- UPC Big Data: Challenges for statistics workshop, 06/2014, Barcelona, Spain

## RESEARCH INTERESTS

Machine Learning, Topic Modelling & Network Science with applications to social good.

## PROGRAMMING SKILLS

Highly skilled with python, r, unix scripting, d3, php, jquery/js, mysql/postgres/mongodb, git, apache/nginx. Experience with: keras, postgis/qgis, spark, java, c++, nodejs, matlab. [github.com/diegoolano](https://github.com/diegoolano)

## EMPLOYMENT EXPERIENCE

### Eric & Wendy Schmidt Data Science For Social Good Fellow

*Data Science For Social Good, University of Chicago, May 2016 - August 2016*

Worked with SEDESOL to improve its resource allocation for the social service benefits it provides to 80 million Mexican citizens. Developed predictive models to estimate incomes, provide the probability of eligibility during recertification periods, impute the social deprivations for a household, etc.

Received training in the state of the art of applied machine learning techniques for working on social projects by the Chief Scientist of Barack Obama's 2012 election campaign..

### Freelance Developer

*Diego Garcia-Olano, www.diegoolano.com; August 2011 -*

Principal architect/developer for a wide range of projects using diverse technology solutions for clients including: Glasstire, Spotify, SEDESOL, Boxee TV, Switch Energy Project, etc( full listing available on site ) Provide entire spectrum of service from frontend to backend and system administration (mostly unix, apache/nginx, mysql/postgres, analytics)

### Software Developer

*Freelancers Union; Brooklyn, New York; April 2009 - Dec 2009, May 2010 - August 2011*

Principal developer of Political Action Committee Fundraising applications for State and Federal PAC's

Principal developer of Client Scorecard (<https://www.freelancersunion.org/client-scorecard/>) and The Freelance Life ( <https://www.freelancersunion.org/the-freelance-life/> ) applications (django,jquery,postgres ) and various dynamic sites used by over 120,000 members

### Software Developer & Lead Support Specialist

*Sapling Systems/Science Technologies; Austin, Texas; Feb 2005 to Aug 2007, Feb 2008 – Feb 2009*

Principal developer of the IBIS learning platform ( [www.saplinglearning.com](http://www.saplinglearning.com)), an educational authoring

platform used by over 35,000 students

Provided research into and working prototypes for incorporation of Item Response Theory models into the companies adaptive learning functionality  
Lead development of in-house Authoring Management System and integration of IBIS into ARIS, Smartwork, Angel and other external client CMS  
Perform lead server-side development of McGrawHill's online homework system (lamp, js)

### **Lead Software Developer**

*Growth Accelerated Partners; Buenos Aires, Argentina; September 2007 to January 2008*

Principal developer of the Label Designer (flex,actionscript3,php,mysql) application for personalwine.com  
Enhanced OSCommerce (an open source e-commerce component) integration in the system and oversaw a remote team of developers in Costa Rica

### **Lead Developer**

*Caritas of Austin; Austin, Texas; Timekeeping System ( February 2007 to February 2008 ); Employment Management System ( March 2006 to March 2007 )*

Designed, developed and deployed a web based system (php,mysql,js,flex2) that digitizes employment search data for a refugee employment program allowing for centralization and better data sharing of job opportunities for its refugee clients while simultaneously facilitating job matches with potential employers  
Designed, developed, and deployed a time-tracking system (php,ajax,mysql) for use by case workers and staff in order to electronically log and track hours worked with features providing greater accountability and transparency of the ways donors' funds are used for existing and potential donors

### **U.S. Embassy Political Affairs Intern**

*Department of State; Western Hemisphere Affairs, Caracas, Venezuela; Aug2004 - Jan 2005*

Maintained and updated the Embassy Caracas SIPRANET Web Page by transferring sensitive cables from Post to site & translating Political bios to English  
Observed Regional Elections in twelve voting centers around the greater Caracas area

### **Developer and Operations Support - NextGen AVS/PVS**

*Ford Motor Company – Global Manufacturing Supply Chain; Dearborn, Michigan; May 2003 - Aug 2003*

Developed project to simulate daily production levels for Ford's manufacturing plant in Belgium (VB, Java )  
Gave recommendations and supported infrastructure, software testing, and acceptance processes at Ford by analyzing a systems solution product provided by GEF

### **IT & eBusiness Infrastructure Intern**

*Ford Motor Company - Global Consumer Systems; Dearborn, Michigan; May 2002 to August 2002*

Lead various benchmark studies comparing Ford IT capabilities with OEM's  
Assisted in analysis and identification of business case and costs of proposed Siebel application for Ford Customer Response Centers in the US and Canada

### **University of Texas at Austin Tutor**

*UT Learning Center; Austin, Texas; January 2002 to July 2004*

Tutored students on a weekly basis in various courses pertaining to the areas of computer science, logic, math, spanish, accounting, and chemistry

### **WORK PROJECTS AND RELATED COURSES**

*\* ACLU Immigration Policy Center Criminal Alien Program Database and Data Visualization; 2008 - 2009*

I wrote a script to parse, place and validate prison records from counties around Texas between 2000

and 2008 into a database and then built a visualization tool which could be used to search and better understand that data. The following policy paper was derived using it: <http://goo.gl/Q1tf8>

\* *Relief Oversight - late 2009 to early 2010*

Helped gather a team to assist in the development of a searchable publicly generated, data-driven application to monitor the activities and effectiveness of organizations soliciting donations for disaster relief in regards to the earthquake in Haiti in December of 2009.

\* *Stanford University Online, Machine Learning class, ml-class.org, certificate obtained; fall 2011*

\* *NYC Machine Learning, NYC Predictive Analytics & Open Stats Programming Meetups; dec 2010-2012*

Regularly attended lectures given by speakers from within industry and academy in Manhattan

## **LANGUAGE PROFICIENCIES**

Fluent Spanish (written & spoken)

French ( Proficient - C1 level as defined by CEFR )

## **AWARDS & AFFILIATIONS**

HSF / Ford Corporate Scholarship Recipient

College of Natural Sciences College Scholar (academic achievement award)

Upsilon Pi Epsilon member (Computer Science Honor Society)

## **VOLUNTEER WORK**

*Spanish Interpreter & Aide.* NYU Hospital For Joint Diseases; Pediatric Orthopedic Care, NY, Fall 2008

*Spanish Interpreter & Aide.* Volunteer Healthcare Clinic ; Austin, Texas July 2008 to September 2008

*ESL Teacher.* El Buen Samaritano; Austin, Texas, fall 2003 to spring 2005

Taught English night courses of varying levels weekly for an Austin non-profit provider of healthcare, leadership development, & self-sufficiency education for working-poor, Spanish-speaking families.

## **ADDITIONAL MASTER LEVEL CLASS PROJECTS**

"Potec Data Set Analysis" , Multivariate Analysis Class Project. Multivariate Analysis class project.

- Predicting whether an individual's income exceeds \$50,000 dollars per year based on UCI census data. Report: <http://diegoolano.com/reports/US-census-wealth.pdf>

"Meta open linked books recommender system". UPC Open Data final project.

Technical Presentation: <http://bit.ly/1HZXseo> | Code & Installation notes: <http://bit.ly/1HbfAli>

"US bike commuters data set analysis", Project for Algorithms of Data mining course.

- Cluster analysis of 2010 Bike Commuters dataset for 374 US cities and metropolitan areas enriched with socio-economic and voting data. <http://diegoolano.com/reports/US-bike-commuters.pdf>

"An analysis of the constitutions of the world's countries." Information Retrieval project

Using text-mining and clustering techniques to compare the constitutions of the world.

Visualization, Code, and Report: <http://diegoolano.com/ir/constitutions-map.html>