

# IRVING GÓMEZ MÉNDEZ



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## Summary

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I am a mathematician that merges the experience in applied statistics and data mining, and a strong theoretical background in statistics (Regression, Inference, Multivariate Analysis, etc.) and machine learning (Random Forests, Neural Networks, SVM, etc.) who enjoys passing from theory to implementation of digital products.

## Computing Skills

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Programming Languages: Python, TensorFlow, Julia, R  
Query Languages: SQL  
Visualization Tools: Shiny  
Other Languages:  $\text{\LaTeX}$ , HTML, CSS

## Research Interests

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Computer Statistics  
Nonparametric Statistics  
Inference with Missing Data  
Data Science and Machine Learning

## Academic Qualifications

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### PhD Candidate in Probability and Statistics

Centro de Investigación en Matemáticas (CIMAT), Guanajuato, Mexico ..... 2017 - 10/2020(Expected)  
Thesis: *Random Forests with Missing Data*, under the direction of Dr. Emilien Joly

### Research stay

Institut National de Recherche en Informatique et en Automatique (Inria), Lille, France .....2020  
*Actively Querying Missing Information Using Neural Networks*, on collaboration with Dr. Jill-Jënn Vie

Courses: Scientific Computing for Probability and Statistics, Statistics for Complex Data, Data Science, Pattern Recognition, Asymptotic Theory for Probability and Statistics, Genomics

### MSc in Probability and Statistics

Centro de Investigación en Matemáticas (CIMAT), Guanajuato, Mexico .....2014 - 2016  
Thesis: *Gráficos de Control Tipo EWMA para Datos de Inspección en Confiabilidad (EWMA Control Charts for Inspection Data in Reliability)*, under the direction of Dr. Enrique R. Villa Diharce

Courses: Mathematical Statistics, Statistical Inference, Stochastic Models, Statistical Models, Reliability, Non-parametric Inference, Multivariate Analysis, Statistics for Industry and Natural Sciences

### Bachelor's degree

Instituto Politécnico Nacional (IPN), Mexico City, Mexico ..... 2009 - 2014  
Mathematical Engineer  
Graduate by completion of master's degree credits

### Exchange Student

Universidade Estadual de Campinas (UNICAMP), Campinas, Brazil .....2012  
Scholarship holder by the Instituto Politécnico Nacional (IPN) to study Operations Research and Statistics

## David Sprott Award

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For the best master's exam in the area of statistics .....2015

## Professional Activities

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2015-2019

Teaching Assistant at CIMAT, Guanajuato

*Statistical Inference* 2015, 2016, 2017, 2018, 2019

*Statistical Models* 2017, 2018, 2019

10/2019

I Workshop in Deep Learning and Data Science, Guanajuato

Presentation of the work: *Random Forests with Missing Data*

11/2017

Workshop in Statistics, Data Mining and Environmental Sciences, Oaxaca

Presentation of the work: *EWMA Control Charts for Inspection Data in Reliability*

01/2017

X Workshop on the Solution of Industrial Problems, Guanajuato

Industrial Collaboration: *Statistical Consulting for Warranty Data Analysis for the Automotive Industry*

11/2016

I Symposium of Inference and Statistical Modeling, Guanajuato

Presentation of the work: *EWMA Control Charts for Inspection Data in Reliability*

01/2016

IX Workshop on the Solution of Industrial Problems, Guanajuato

Industrial Collaboration: *Statistical Consulting for Reliability Analysis for the Food Industry*

06/2015

XII Workshop on the Solution of Calculus Problems, Guanajuato

Monitor for a team of undergraduate students.

08/2013 - 07/2014

Control Quality Engineer at PESISA, Mexico City

*Implementation of 5S processes and lean manufacturing projects*

## Certifications

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03/2016

*Toyota Production System*. Grupo Scopre, Leon

09/2013 - 11/2013

*Data Sets with SQL*. Instituto Politécnico Nacional (IPN), Mexico City

08/2013 - 09/2013

*Statistical Analysis with SPSS*. Instituto Politécnico Nacional (IPN), Mexico City

## Conferences Attended

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07/2018

XXVIII Annual Conference of the International Environmental Society, Guanajuato

09/2017

I School of Data Science, Cuernavaca

09/2015

XXX National Forum on Statistics, Acapulco

03/2014

XII School of Probability and Statistics, Guanajuato

## Conferences Given

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03/2020

Inria Sequel Seminar, Lille

*Some ideas for random forests with missing values*

01/2020

TRIPODS workshop CIMAT-University of Arizona, Guanajuato

*Some ideas for random forests algorithms with missing values*

05/2019

Probability and Statistics Seminar CIMAT, Guanajuato

*Regression with missing data using random forests*

## Languages

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Spanish	Native
Portuguese	Fluent
English	Fluent
French	Basic
Russian	Basic