# IRVING GÓMEZ MÉNDEZ

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## Summary

I am a mathematician that merges the experience in applied statistics and data science with a solid theoretical background in statistics (Regression, Inference, Multivariate Analysis, etc.) and machine learning (Random Forests, Neural Networks, SVM, Recommender Systems, etc.) who enjoys passing from theory to development of tech products.

A portfolio of past and current projects can be found at https://irvinggomez.com/#projects

## Computing Skills

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|---|---|
| Programming Languages: | Python, Julia, R |
| Data Visualization: | Plotly, Tableau, Shiny, ggplot2 |
| Deep Learning: | TensorFlow |
| Big Data: | Spark, Pyspark |
| Data Analysis: | SPSS, Google Analytics |
| Other Languages: | LaTeX, HTML, CSS, SQL |

## Professional Experience

**Centro de Investigación en Matemáticas**

**PhD Candidate in Probability and Statistics**
August 2016 - Now

- Research and implementation of algorithms to handle complex missing mechanisms using random forests.
- Implementation of algorithms to actively querying missing information for recommender systems using neural networks.
  *In collaboration with Inria Lille-Nord Europe.*
- Development of new methodologies based on non-exhaustive classification for detection of illegal traffic of species in America.
  *In collaboration with Cinvestav-Irapuato.*
- Teaching assistant in undergraduate and graduate subjects.

**MSc in Probability and Statistics**
August 2014 - July 2016

- Design and development of a graphical user interface for inspection data in reliability.
- Implementation of methodologies for control quality with heavily censored data.
- Statistical consulting for the automotive industry, improving its warranty management.
- Reliability analysis for the food industry, increasing preference of consumers.
- Teaching assistant in undergraduate and graduate subjects.

**PESiSa**

**External Advisor**
January 2014 - July 2014

- External advisor responding directly to the engineer direction.
- Improvement of control quality systems.
- Implementation of 5S processes.
- Design of lean manufacturing projects.

## Academic Qualifications

**PhD Candidate in Probability and Statistics** ..... 2016 - Now
Centro de Investigación en Matemáticas (CIMAT), Guanajuato, Mexico
Thesis: *Random Forests with Missing Data*, under the direction of Dr. Emilien Joly

**Research stay** ..... 2020
Institut National de Recherche en Informatique et en Automatique (Inria), Lille, France

*Actively Querying Missing Information Using Neural Networks*, on collaboration with Dr. Jill-Jênn Vie

**MSc in Probability and Statistics**
Centro de Investigación en Matemáticas (CIMAT), Guanajuato, Mexico ..... 2014 - 2016

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

**Exchange Student** ..... 2012
Universidade Estadual de Campinas (UNICAMP), Campinas, Brazil
Scholarship holder by the Instituto Politécnico Nacional (IPN)

## David Sprott Award, 2015

Annual prize granted by Centro de Investigación en Matemáticas (CIMAT) to the best master's exam in the area of statistics.

## Conferences Attended

07/2018
XXVIII Annual Conference of the International Environmetrics 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

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 with missing values*
05/2019
Probability and Statistics Seminar CIMAT, Guanajuato
*Regression with missing data using random forests*

## Certifications

*Google Analytics*
*Toyota Production System*
*Data Sets with SQL*
*SQL for Data Science*
*Statistical Analysis with SPSS*

## Languages

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|---|---|
| Spanish | Native |
| Portuguese | Fluent |
| English | Fluent |
| French | Basic |
| Russian | Basic |