# **Cristian Garcia**

Data Scientist + Developer with Background in Maths & Physics

### **Contact Info**

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## **Summary**

Data Scientist and Developer with background in maths and physics. My two passions are programming and deep learning, I consider myself a strong programmer/developer given my experience creating real world applications and my love for functional programming, however my area of interest has always been scientific computation and enjoy programming deep neural networks in tensorflow.

## **Experience**

- AristaDev Cofounder/Developer: Cofounder and main developer on an Augmented Reality platform. I developed the mobile client and backend of Arista using tecnologies such as Unity3D, Elixir, Docker, Nginx, and PostgreSQL.
- PTK Mathematical Developer (2015): Researched on strategies to optimize pickup planning in warehouses. Researched on technologies to create scalable multi-tenant software.
- Senseta Data Scientist (2016): Developed a Linux and Windows python application for HR software to measure employee productivity.

Cleaned and analyzed large datasets using Spark and Zeppelin.

Created a service in Python for Entity extracting using NLTK. Created a generic ML prediction service using Scikit Learning and Flask.

 BD Guidance - Data Scientist (current): Designed the curriculum of various Data Science/ML courses. Evaluated various IoT platforms.
 Investigated technologies such a TensorFlow and OpenCV to run ML algorithms in IoT devices.

## **Open Source**

- phi: fluent functional programming in python.
- dataget: download, extract and process popular machine learning datasets with a single line of bash or python.
- tfinterface: develop structured models in tensorflow and get lots functionality for free
- cybrain: fast neural network in python, written in cython.
- karma: MVC library for Unity3D

### **Areas of Interest**

#### **Data Science**

Deep Learning/Neural Networks, Artificial Intelligence, Optimization/Heuristics, Mathematical Modelling, Agent-based Simulation, Network Analysis

### **Development**

Functional Programming, Distributed Systems

## Languages

- Spanish: native
- English: C2, bilingual school since 4 years old

# **Programming Languages**

Python: 6+ years, Matlab: 6+ years, Mathematica: 3+ years, C#: 2+ years,

Elixir: 2+ years, JavaScript: 1+ years, Dart: 1+ years, Cython: 1+ years

#### **Mini-projects**

C, Haskell, Java, Lisp, Scala, Elm, Rust, Coq, Julia

### **Tools/Frameworks**

#### **Data Science**

Tensorflow (python), Scikit Learn (python), Pandas, Numpy, NetworkX (python), Spark (scala/python), AnyLogic (java)

#### **Development**

Phoenix Framework (elixir), Flask (python), Graphine (graphql + python), Git, Unity3D (c#), PostgreSQL, MongoDB, RethinkDB

#### **DevOps**

Docker, Nginx

## Community

#### Organizations/Groups

- Co-founder of Machine Learning Colombia
- Co-founder of Machine Learning Meetup Medellin
- Founder of colomb-ia

#### Talks/Conferences

- Deep Learning with TensorFlow at Machine Learning Meetup Medellin
- Introduction to Spark at Machine Learning Meetup Medellin
- Deep Learning & TensorFlow at Big Data & Data Science Bogotá
- Deep Learning with TensorFlow at pataconf
- Introduction to Deep Learning with TensorFlow at PyCon Colombia
- Scalable Deep Learning with TensorFlow at ScaleConf Colombia
- Machine Learning 2017 at Machine Learning Meetup Medellin
- TensorFlow for Developers at Machine Learning Meetup Medellin

#### **Webinars**

- Deep Learning with TensorFlow with BD Guidance on Youtube.
- Introduction to Machine Learning with BD Guidance on Youtube.
- Neural Networks with TensorFlow for Image Recognition with BD Guidance on Yotube.
- Q-Learning with OpenAl Gym + Numpy with BD Guidance on Yotube.

#### **Videos**

 Deep Reinforcement Learning con TensorFlow para el entorno Lunar Lander de OpenAl Gym

# **Projects**

• Basic ConvNet for the German Traffic Signs Dataset

# e-Learning

- Machine Learning by Andrew Ng on Coursera
- Neural Networks for Machine Learning by Geoffrey Hinton on Coursera
- Intro to Artificial Inteligence by Sebastian Thrun and Peter Norvig on

#### Udacity

- Artificial Inteligence for Robotics by Sebastian Thrun on Udacity
- Deep Learning by Vincent Vanhoucke (Google) on Udacity
- Software Development Process by Alex Orso on Udacity.

### Things I Love

### **Papers**

- Playing Atari with Deep Reinforcement Learning Mnih et al 2013 (Deep Mind)
- Asynchronous Methods for Deep Reinforcement Learning Mnih et al 2015 (Deep Mind)
- Playing FPS Games with Deep Reinforcement Learning Glample et al 2017 (Carnegie Mellon)
- Deep Residual Learning for Image Recognition He et al 2015 (Microsoft)
- Dropout: A Simple Way to Prevent Neural Networks from Overfitting Hinton et al 2014 (Toronto University)
- Highway Networks Srivastava et al 2015

#### **Books**

- Reinforcement Learning: An Introduction Sutton & Barto- 2017
- Deep Learning Book Ian Goodfellow, Yoshua Bengio and Aaron Courville - 2016

#### **Hobbies**

- Tennis
- Climbing (boulder)