

# Miguel Morales

## TECHNICAL SKILLS

Languages	Python*, Java*, C, C++, C#, R*
Frameworks	Numpy*, Scikit-Learn*, Scipy*, OpenCV*, Pandas TensorFlow*, Keras, BURLAP*, Android SDK Matplotlib, ggplot2, glibc, CUDA, OpenAI Gym
Fields	Reinforcement Learning*, Deep Learning* Artificial Intelligence*, Statistics Optimal Control, Parallel, Bayesian
Tools	git*, Docker*, Emacs*, UNIX tools*, Gazebo Vagrant, AWS, KVM*, ROS, VirtualBox
Methodologies	Agile Scrum, OOP, OOD, OOA, TDD, BDD
OSs	Linux* (Arch, RedHat, Debian), Windows, ESXi

\*Denotes expert level

## PROJECTS

**Deep Reinforcement Learning** | Ping Pong Agent Udacity  
[www.github.com/mimoralea/king-pong](https://www.github.com/mimoralea/king-pong)

- Incorporated TensorFlow and OpenCV to learn the state space from raw pixels.
- Implemented Deep Reinforcement Learning algorithm as suggested by the Google DeepMind team.

**Artificial Intelligence for Robotics** | PID & Localization Georgia Tech  
[www.github.com/mimoralea/kalman-karma](https://www.github.com/mimoralea/kalman-karma)

- Influenced team to propose unique project to the Instructors.
- Conjointly implemented PID controller and localization algorithms such as SLAM and Particle Filter.

**Convolutional Neural Networks** | Traffic Sign Classification Udacity  
[www.github.com/mimoralea/traffic-signs](https://www.github.com/mimoralea/traffic-signs)

- Programmed image pre-processing pipeline using Computer Vision techniques and OpenCV library.
- Implemented and improved a Deep Convolutional Network from published paper using TensorFlow.

**Behavioral Cloning & Transfer Learning** | Driving Clone Udacity  
[www.github.com/mimoralea/behavioral-cloning](https://www.github.com/mimoralea/behavioral-cloning)

- Leverage existing CNN architecture and weights using Transfer Learning to clone human driving in simulated car.
- Built parallel implementation on multiple GPUs with Keras.

## FORMAL EDUCATION

**Georgia Institute of Technology**  
 MS in Computer Science – GPA 3.89/4.00  
 Interactive Intelligence Specialization

**Florida Atlantic University**  
 BS in Computer Science – GPA 3.88/4.00  
 Upsilon Pi Epsilon - Computer Science Honors Society

## CERTIFICATES AND ADVANCED COURSES

Machine Learning Nanodegree	Udacity
Self-Driving Car Nanodegree	Udacity
Data Science Specialization	Coursera
Reinforcement Learning and Decision Making	GaTech
Artificial Intelligence for Robotics	GaTech
Artificial Intelligence	GaTech
Machine Learning	GaTech

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 🌐 Website: [www.mimoralea.com](http://www.mimoralea.com)

## WORK EXPERIENCE

**Udacity** Remote  
 Self-Driving Car Nanodegree Mentor Dec 2016 – Current

- Motivated group of 20 students daily to learn and study Self-Driving Car concepts and techniques.
- Supervised weekly student progress and held them accountable allowing the effort of learning to occur.

**Udacity** Remote  
 Code Reviewer Jun 2016 – Current

- Provide actionable feedback to students around the world for Self-Driving Car and Machine Learning projects.
- Recommend program design best practices in Python, to improve code readability and maintainability.

**Georgia Institute of Technology** Remote  
 Head Graduate Teaching Assistant Jan 2016 – Current

- Host weekly open floor online meetings yielding improved student performances.
- Oversee team of graders and provide standards to deliver a seamless experience.

**Hewlett Packard Enterprise** Plano, TX  
 Firmware Engineer Jun 2015 – Apr 2016

- Initiated peer programming approach and mentored engineers on Java and program design principles.
- Enhanced the internal test development framework coverage and quality.

**HomeCEUConnection** Plano, TX  
 Senior Web Developer May 2014 – Apr 2015

- Established Agile methodologies, streamlining the completion of tasks.
- Diagnosed site-wide downtime, and took immediate action and complex decisions under pressure to resolve issue.

**Cisco Systems** Lawrenceville, GA  
 Software Engineer Mar 2013 – Jan 2014

- Co-authored prototypes of the IP Client set top boxes to be showcased at national customer events and news media.
- Collaborated on design meetings to architect solutions.

**AT&T** Plano, TX  
 Member of Technical Staff Jan 2011 – Mar 2013

- Aligned U-verse Advanced Technical Support Data Collection Team to better assist customers.
- Pioneered C# web dashboard that centralized the 13,000+ servers of the entire U-verse platform.

## EXTENDED WORK EXPERIENCE

<b>DataCore</b>   Test and Integration	Florida   2010 – 2011
<b>ArchieMD</b>   Test and Integration	Florida   2010
<b>Freelancer</b>   Web Developer	Florida   2007 – 2009
<b>VideoNET</b>   System Administrator	Venezuela   2003 – 2006