# Miguel Morales

May 2017

Dec. 2000

# TECHNICAL SKILLS

Fields	Reinforcement Learning, Artificial Intelligence,
	Deep Learning, Deep Reinforcement Learning
Subfields	Value-based methods, Actor-Critic methods,
	Curriculum Learning, Multi-agent systems
Methodologies	Agile, Scrum, OOP, OOD, OOA, TDD, BDD

Languages Python, Java, C++, C, C#, R Frameworks OpenAl Gym, Numpy, PyTorch, Scipy AFSIM, git, Docker, Emacs, UNIX tools Tools OSs Linux (Arch, RedHat, Debian), Windows, ESXi

## FORMAL EDUCATION

#### Georgia Institute of Technology ETA 2025 PhD in Computer Science - GPA -/4.00 Machine Learning & Intelligent Systems Specialization

Georgia Institute of Technology MS in Computer Science - GPA 3.70/4.00 Interactive Intelligence Specialization

Florida Atlantic University Dec 2010 BS in Computer Science - GPA 3.88/4.00 Upsilon Pi Epsilon - Computer Science Honors Society

**Broward College** AA in Computer Science - GPA 3.66/4.00

# CERTIFICATES AND ADVANCED COURSES

Udacity   Deep Learning Foundations Nanodegree	Jan 2018
Udacity   Self-Driving Car Nanodegree	Oct 2017
Udacity   Machine Learning Nanodegree	Jun 2016
GaTech   Artificial Intelligence	May 2016
GaTech   Machine Learning	May 2016
GaTech   Reinforcement Learning and Decision Making	Dec 2015
GaTech   Artificial Intelligence for Robotics	Dec 2014

### **EXTERNAL PROJECTS**

Grokking Deep Reinforcement Learning book | Author Manning https://www.manning.com/books/

grokking-deep-reinforcement-learning

- Authored a book on deep reinforcement learning.
- Wrote all text, and created all figures to ensure challenging concepts were introduced in an approachable way.

Deep Reinforcement Learning SOTA algorithms | Engineer Manning www.github.com/mimoralea/gdrl

- Implemented from scratch reusable code for a wide variety of reinforcement learning algorithms, and data analysis tasks.
- Used PyTorch for implementing deep reinforcement learning methods, such as DQN, A3C, DDPG, SAC, PPO, and more.

Deep Reinforcement Learning AC lectures | Teacher Udacity https://www.udacity.com/course/

deep-reinforcement-learning-nanodegree--nd893

- Developed the Actor-Critic lectures of the Deep Reinforcement Learning Nanodegree.
- Created all draft animations and full scripts to explain the concepts in an intuitive way.

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LinkedIn, GitHub, StackOverflow, Twitter by mimoralea

Website: http://mimoralea.github.io/

#### **WORK EXPERIENCE**

Lockheed Martin Littleton, CO & Full-Time Remote Research Engineer Staff Oct 2020 - Current Software Engineer Staff Sep 2019 - Oct 2020 Software Engineer Senior Jun 2017 - Sep 2019

- Developed a framework for training deep reinforcement learning agents on military scenarios.
- Trained deep reinforcement learning agents on a variety of military scenarios and domains.
- Architected a prototype of a follow-me perception system for military applications.
- Implemented explainable Al agents, including deep reinforcement learning agents.
- Supported affordability IRAD projects by evaluating capabilities of cost-effective sensors.
- Developed perception pipeline of autonomous mining trucks.

Georgia Institute of Technology Remote Instructional Associate May 2017 - Current Head Graduate Teaching Assistant May 2016 - May 2017 Graduate Teaching Assistant Jan 2016 - May 2016

- · Taught a Reinforcement Learning and Decision Making graduate course since Spring 2016.
- Taught a Machine Learning undergraduate course in Summer
- Oversaw up to 20 Graduate Teaching Assistants per semester.

Udacity Remote Content Developer Jun 2018 - Dec 2018 Project Reviewer Jun 2016 - Jun 2017 Student Mentor Dec 2016 - Jun 2017

- Developed the Actor-Critic lectures for the Deep Reinforcement Learning Nanodegree.
- · Provided actionable feedback to students around the world on self-driving car and machine learning projects.
- Recommended program design best practices in Python to improve code readability and maintainability.

#### **Hewlett Packard Enterprise**

Plano, TX Jun 2015 - Apr 2016

Firmware Engineer

- · Initiated peer programming approach and mentored engineers on Java and program design principles.
- Supported the release of next generation server blade management software.
- Improve quality of production software by partnering with development groups of different business areas.

#### EXTENDED WORK EXPERIENCE

HomeCEUConnection | Senior Software Engineer Texas | 2014 - 2015 Cisco Systems | Software Engineer Georgia | 2013 - 2014 AT&T | Member of Technical Staff Texas | 2011 - 2013 DataCore | Test and Integration Florida | 2010 - 2011 **ArchieMD** | Test and Integration Florida | 2010 Freelancer | Web Developer Florida | 2007 - 2009 VideoNET | System Administrator Venezuela | 2003 - 2006