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## Skills



	Series	(9) Courses
01	Applied Machine Learning	<ul style="list-style-type: none"><li>• Data Engineering</li><li>• Supervised Learning</li><li>• Unsupervised Learning</li></ul>
02	Industrial Machine Learning	<ul style="list-style-type: none"><li>• Recurrent Neural Networks</li><li>• Convolutional Neural Networks</li><li>• Reinforcement Learning</li></ul>
03	Specialized AI	<ul style="list-style-type: none"><li>• Generative Adversarial Networks</li><li>• Transfer Learning</li><li>• Natural Language Processing</li></ul>

## Applied Machine Learning I



35% COMPLETE Last activity on October 12, 2020 2:50 pm

IN PROGRESS

## Course Introduction

In this course, you will be serving as an intern for an Artificial Intelligence consulting company named ReconFive, which specializes in using technology to build processes for generating leads for retail service organizations – i.e. they help find potential customers for businesses. You will be working with Janice Dobbins, a machine learning engineer, to assist her with building a new predictive model to help convince a potential new client that ReconFive is the right company for their needs. In order to accomplish this, you'll need to fully understand how machine learning can be used to do this and other things as well as the specific role(s) data plays in the entire process. You will also work alongside Data Scientists during this process so obtaining an understanding of data retrieval will also be handy.

## What you will learn in this course:

- What type of questions supervised machine learning can help solve
- Inference vs Prediction
- Planning and implementing a working machine learning environment
- Using the Python programming language for solving machine learning problems
- Using SQL for obtaining data
- Using Jupyter Notebook and GitHub for building and presenting machine learning projects
- Cleaning and preparing data for machine learning projects
- Cross Validation and model selection
- Model training, testing and assessment
- Model deployment to Heroku

This is the start of your newest *Learning Journey* where you will be making numerous stops along the way to acquire new skills. This is your first stop so read the material carefully!



Welcome to the team!

This is the start of your newest *Learning Journey* where you will be making numerous stops along the way to acquire new skills. This is your first stop so read the material carefully!

We are very excited to have you working with us and I am personally excited to have you on my team for this project. My name is Jill and I will be your manager during your onboarding, training and your first month of work at ReconFive. Do not panic, you'll not be getting a new manager every month, but rather I am here to help get you up to speed on the way we do things here at ReconFive and help brief you on the first project you and I will be working on together.

We've recently been contracted by a client to help them better study their prior customers so their sales and marketing teams can build targeted initiatives to reach potential future customers. The client has provided the results of their most recent marketing initiatives, which were based on phone calls.

In addition, they want us to investigate if a predictive model can be constructed to help them acquire customers faster through rapid identification. This is a common practice in the area known as **Customer 360** and an area that we do a great deal of work in; I have included some external resources for you to read about this well area since we do so much work there. Be sure to come up to speed on the materials so you can better understand the higher level concepts and reasons why we're doing what we're doing. You'll often find in most machine learning tasks, we do not often have the benefit of prior domain knowledge so always make time to do your own due diligence prior.

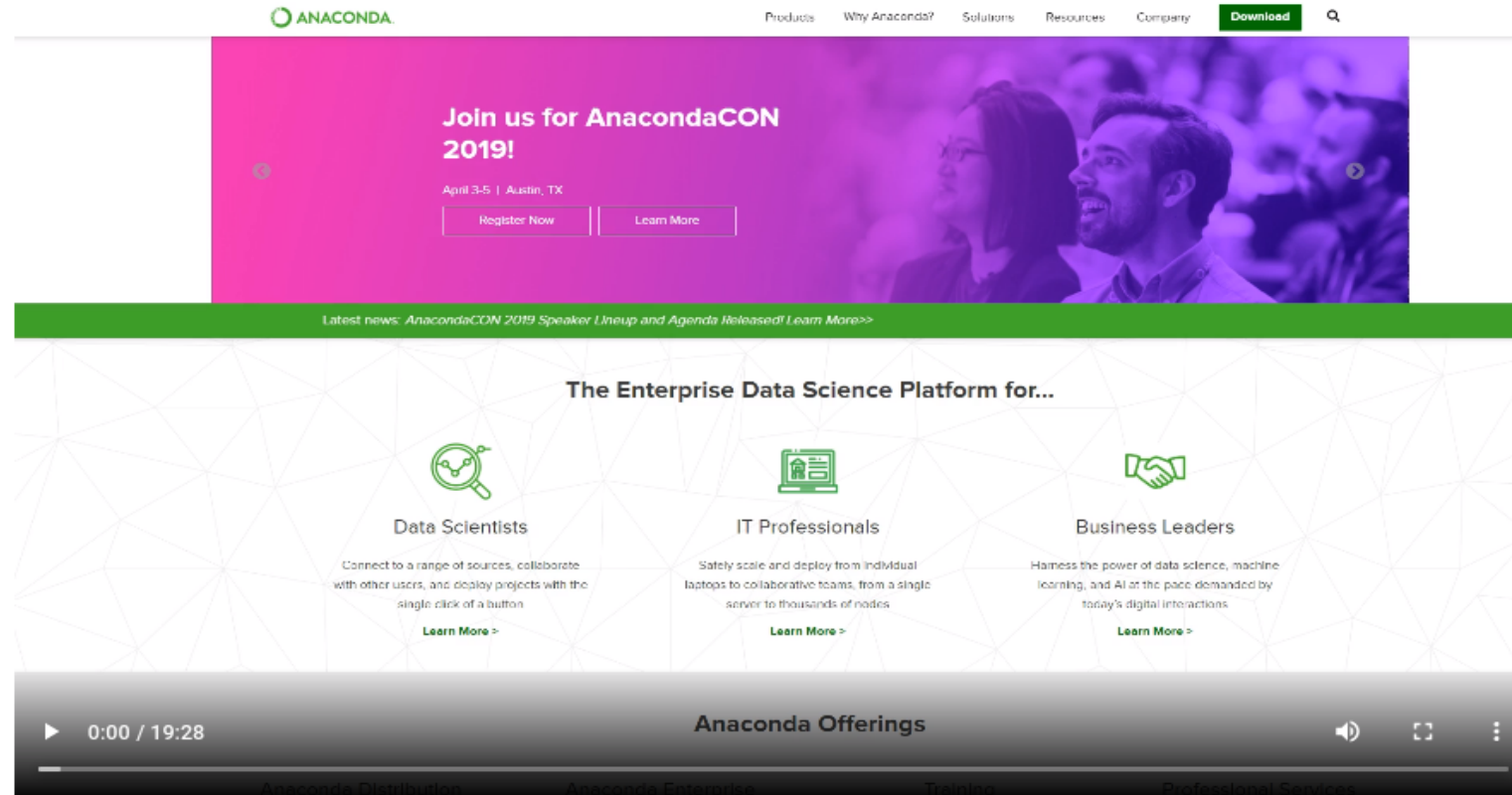
## Anaconda

Applied Machine Learning I > Setting Up Your Environment > Anaconda

COMPLETE

LESSON PROGRESS

75% COMPLETE



The screenshot shows the Anaconda website. At the top, there is a navigation bar with links for Products, Why Anaconda?, Solutions, Resources, Company, and a Download button. Below the navigation bar is a large banner for AnacondaCON 2019, featuring a photo of a crowd and text that says "Join us for AnacondaCON 2019! April 3-5 | Austin, TX" with "Register Now" and "Learn More" buttons. Below the banner is a green bar with the text "Latest news: AnacondaCON 2019 Speaker Lineup and Agenda Released! Learn More >". The main content area is titled "The Enterprise Data Science Platform for..." and features three columns with icons and text: "Data Scientists" (with a magnifying glass icon), "IT Professionals" (with a server rack icon), and "Business Leaders" (with a handshake icon). Each column has a "Learn More >" link. At the bottom of the screenshot is a video player with the title "Anaconda Offerings" and a progress bar showing 0:00 / 19:28.

Before we can even begin to dive into the data and details of this projects, lets work together and set up your working environment. Why is this important if we already have numerous tools that we can use right 'out-of-the-box'? Different companies use many different environments to solve problems with machine learning and knowing how to not only set up, but also obviously work within and even repair these environments is considered part of being a good machine learning practitioner. Its kind of like owning a piece of equipment, but nor knowing how to fix it when it no longer works. We cannot afford much downtime while an expert comes in to fix our environments, we need to be able to do so ourselves.

Here at ReconFive, we use an industry standard environment for our on-prem (on-site) machine learning solutions and it consists of the following:

- Python
- Anaconda
- Jupyter Notebook
- Heroku (for deployment)

*Before we get too far into the weeds, it is very important to know how to use command line tools on your machine. If you are not already familiar with the terminal or command prompt on your machine, please stop here and visit the resources section. FYI – this is also often considered to be a mandatory skills of all machine learning practitioners.*

## Anaconda: Downloading and Setting Up

Per the [Anaconda website](#): “Anaconda is the leading open data science platform powered by Python. The open source version of Anaconda is a high-performance distribution of Python and R that includes over 100 of the most popular Python, R and Scala packages for data science. Additionally, you’ll have access to over 720 packages that can easily be installed with conda, our renowned package, dependency and environment manager, that is included in Anaconda.”

But, we are not doing Data Science, right? That is correct, but machine learning is often used in Data Science and we often use many of the same tools so using Anaconda is a no-brainer if it already contains everything we need to do our work.

Lets start by downloading and installing Anaconda:

- [Installing on Windows](#)
- [Installing on macOS](#)
- [Installing on Linux](#)

To check the installation, open your Terminal (OSX/Linux), if you’re on another computer, open a command line. If it was successful, you’ll see (base) appear next to your name as in the example below (your’s might look a little different – just look for the (base) portion):



To see all the tools (packages) that are already installed, type the following code and press enter.

```
conda list
```

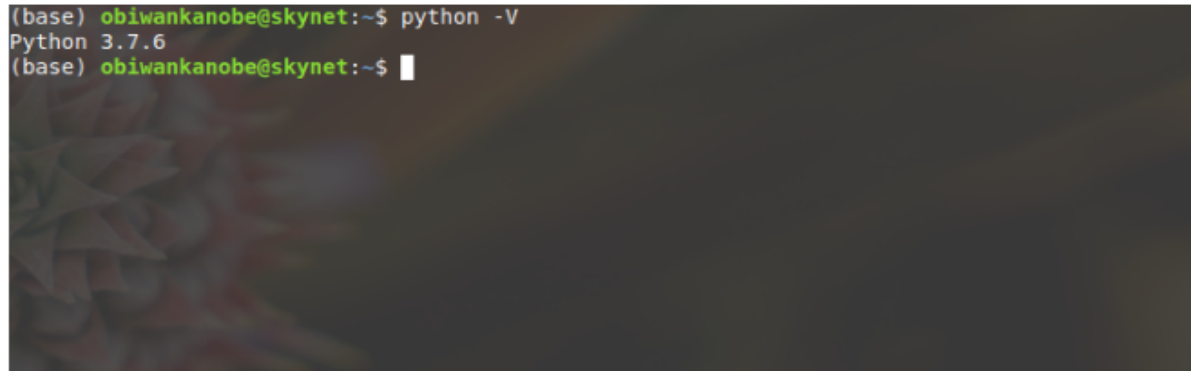
What you should see is four columns: Name, version, build and channel.

- Name is the package name. A package is just a collection of code someone else has written.
- Version is the version number of the package
- Build is the Python version the package is made for.
- Channel is the Anaconda channel the package came from, no channel means the default channel.

While we're here, lets go ahead and check your version of Python by entering the following command:

```
python -V
```

You should see something like the image below; as long as you have anything greater than Python 3.0 you are good to go!



```
(base) obiwanokobe@skynet:~$ python -V  
Python 3.7.6  
(base) obiwanokobe@skynet:~$
```

*If you accidentally leave off the -V, you'll start the Python interpreter and will need to type exit() to get back to your terminal.*

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# Our Model

## Job Readiness

Graduation depends on mock interview and portfolio quality (we help in both areas)

## Just-In-Time Support

Support provided through synchronous and asynchronous methods

## High Quality Curriculum

Created by industry experts:  
100% Learn By Doing

## Mentored Experience

Every student is guided by an expert mentor who provides continuous feedback for improvement

