Instructions on installing Python and Gurobi

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1. Installing Python

There are various ways of installing python. The straightforward way is to go to the website https://www.python.org/downloads/, download the installer and then install python. Another way is to install Anaconda which installs Python with an Integrated Development Environment (IDE) named **Spyder**, a command shell named **IPython**, and **Jupyter Notebook**, which I'll use for teaching.

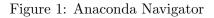
What is Anaconda?

According to Wiki, Anaconda is a free and open-source distribution of the **Python** and **R** programming languages for scientific computing (data science, machine learning applications, largescale data processing, predictive analytics, etc.), that aims to simplify package management and deployment.

Instructions to install Anaconda

- A. Go to the website https://www.anaconda.com/products/individual.
- **B.** Click on the **Download** button. It may start downloading the installer or you may need to select the appropriate OS and processor and then save the installer.
- C. Go to the download folder location and double click on the installer.
- D. Click Next, I agree, Next, then Install, and finally, Finish.
- E. Search Anaconda Navigator in the start menu and open jupyter notebook.

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Running your Anaconda workload Graviton-based processors could up to 40% better price perform	provide seconds in a pre-configured environment. Enjoy coding assistance for Python, SQL, and R in Jupyter notebooks and benefit from no-code automations. Use Datafore	IBM watsonx is an enterprise-ready AI platform including a data store, model builder, and AI model management and monitoring.	OCI Data Science offers a machine learning platform to build, train, manage, and deploy your machine learning models on the cloud with your favorile open-source tools	0.1.1	1.2.4 Multidimensional data visualization across Ries. Explore relationships within and among related datasets.	3.34.0 Component based data mining framework. Data visualization and data analysis for novice and expert, interactive workflows with a large toolbox.	0.0.1
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	ConeDrive	3 years ago
	C Pictures	4 days ago
	C Roaming	3 years ago
	Saved Games	4 days ago
	Searches	4 days ago
	Source	2 years ago

Figure 2: Jupyter window

2. Installing Gurobi

Gurobi is a commercial optimization solver. We will use it to solve linear and integer programs. Here are the instructions to install gurobi and its license.

- A. First go to the website https://pages.gurobi.com/registration.
- B. Make an account on this webpage. Select Academic User and fill out other details. Click

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	Figure 3: C	Gurobi r	egistration	

on the confirmation email if needed.

- C. Click on the link https://www.gurobi.com/login/ and login into your account.
- **D.** Now go to the website https://www.gurobi.com/downloads/. Click on **Gurobi Optimizer** and the click on **I accept the end user license agreement**. Download the installer for appropriate OS and processor.
- E. Go to the download location and double click the msi installer. Click Next, check the user agreement and click Next, Install and Finish.
- F. Now go to User Portal that you logged in (https://portal.gurobi.com/iam/home) (See Figure

4 below). Click on **Licenses** on the left bar and then click on **Request**. Click on **Generate Now!** under the category **Named-user Academic**. Check box the **terms of the End User License Agreement** and then click on **Confirm**.

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	Run Gurobi Optimizer where you want, across or regular machines and container environments (Dacker, Kubernetes) with floating capability.	Get a free, unlimited-use Gurobi Optimizer license for a single person, on a single machine.	Get on-demand access to Gurobi on cloud machines. Although the license is free, you'll be responsible for the cost of cloud resource usage.	Through our Take Gurobi With You (TGWY) program, you can continue to get free, unrestricted access to Gurobi after graduation. This means you can bring the speed,	Share Gurobi with multiple users in your academic departments, schools, and classrooms by running Gurobi on your university's local-area network, at no cost to you or your institution.	If you'd like to learn to use Gurobi, but you don't meet our academic program qualification requirements, you can sign up for our free Gurobi Online Course License.		
	Runs on machines and containers Requires Gurobi V10 or later Requires an internet connection during usage Valid for 90 days Can be extended as long as you maintain eligibility	Runs on a single machine only Supports any Gurobi versions Requires an internet connection for installation Valid for one year New licenses can be generated as long as you maintain eligibility	To get started, visit our Help Center and request an Academic Gurobi Cloud License,	scope, and problem-solving power of optimization with you into the workplace, using a tool you already know.	To get started, your institution's network administrator will need to visit our Help Center and request an Academic Site License.	It has limited capabilities (max 2000 decision variables and 2000 constraints)-but it is robust enough for new learners.		
	GENERATE NOW!	GENERATE NOW!	SUBMIT REQUEST	APPLY NOW	SUBMIT REQUEST	GENERATE NOW!		

Figure 4: Gurobi license

G. This should generate the key shown in the Figure 5.

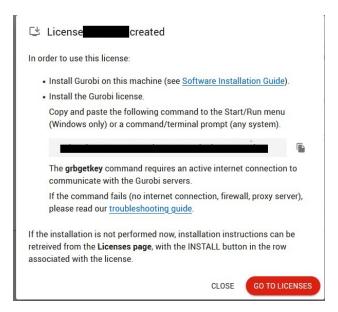


Figure 5: Key

H. Copy the above key and then go to command prompt (Go to start menu and type cmd and hit enter). Paste the key and hit enter. You may need to type "y" and press enter (see Figure 6).

Command Prompt	-
Microsoft Windows [Version 10.0.22621.525] (c) Microsoft Corporation. All rights reserved.	
C:\Users\DELL>grbgetkey	
In which directory would you like to store the Gurobi license file? [hit Enter to store it in C:\Users\DELL]:	
info : License written to file C:\Users\DELL\gurobi.lic	
C:\Users\DELL>	

Figure 6: Installing license in the local machine

I. To install the python package gurobipy, open command line and change your directory to the Gurobi installation directory by using command cd C:\gurobi800\ win64 (or whatever your default installation directory is). Now type python setup.py install and hit enter. You might have to open cmd as an administrator. Also, if Python is not added to the path. Then, perform this step using the Anaconda Prompt (type this in windows search).