Installation Guide for Relevant Software

Chair for Operations Management

Prof. Dr. Janis Neufeld

1. Relevant Software
2. Installation Guide for Windows
3. Installation Guide for MacOS
4. Additional Usage Instructions

1. Relevant Software
2. Installation Guide for Windows
3. Installation Guide for MacOS
4. Additional Usage Instructions

1. Relevant Software

- Visual Studio Code (VSC)
  —> https://code.visualstudio.com/Download

- Python
  —> https://www.python.org/downloads/

- Gurobi
  —> https://www.gurobi.com/features/academic-named-user-license

- Anaconda (only needed for MacOS)
  —> https://www.anaconda.com/download/success

1. Relevant Software

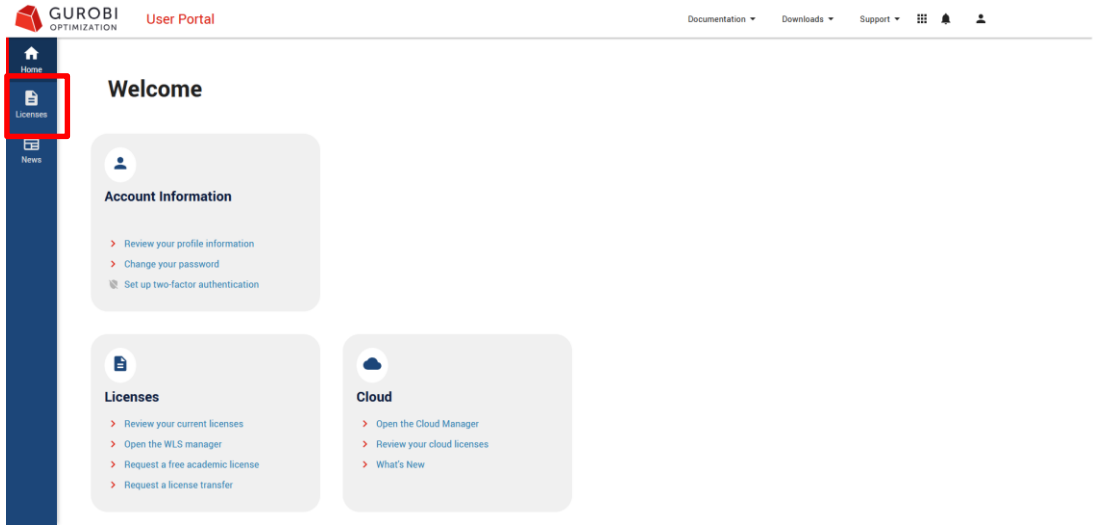
2. Installation Guide for Windows

3. Installation Guide for MacOS

4. Additional Usage Instructions

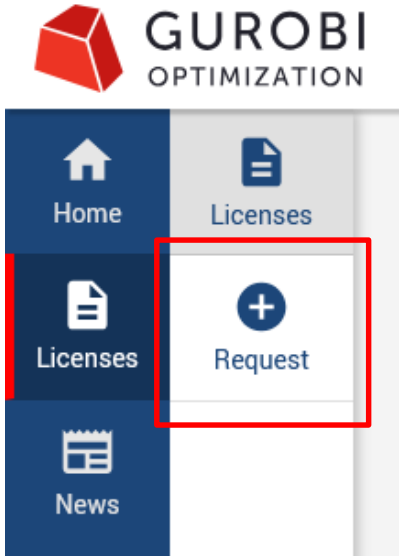
2. Installation Guide for Windows
2.1 Generating and Installing a Gurobi License

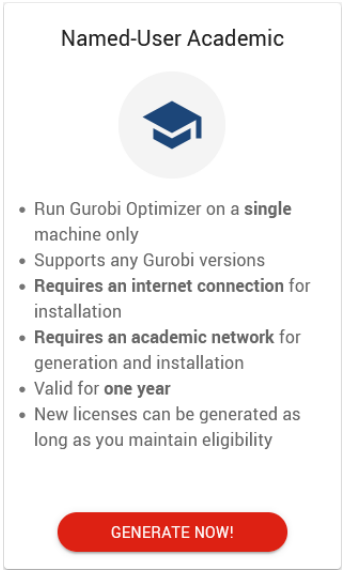
1. Register at gurobi.com.
2. Select “Licences” in side menu.



2. Installation Guide for Windows
2.1 Generating and Installing a Gurobi License

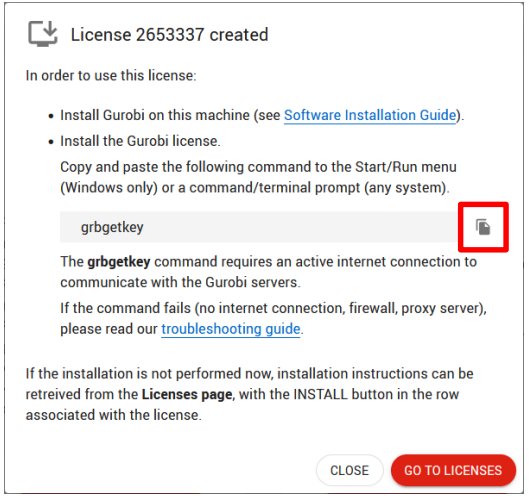
3. Click on “Request” to request a new license and choose “Named-User Academic” as Gurobi license.





2. Installation Guide for Windows
2.1 Generating and Installing a Gurobi License

4. Click on “CONFIRM REQUEST” in the pop-up window (confirms the end user license agreement).
5. The license is generated. Another pop-up window will open.
6. Click on the “Copy” symbol near the grey text field.

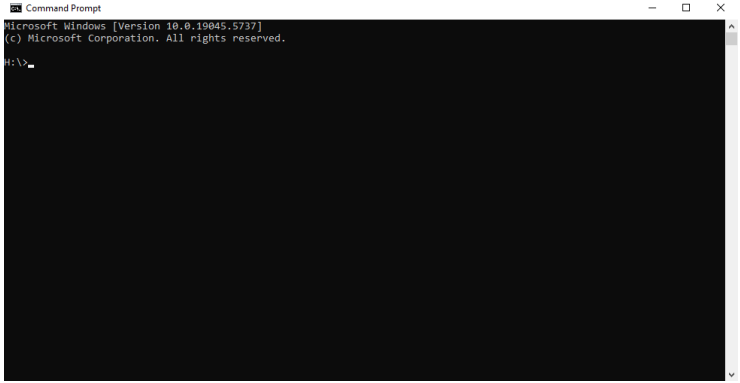


2. Installation Guide for Windows
2.1 Generating and Installing a Gurobi License

7. Download and installation of Gurobi
   → link for the download page
8. Follow the installation guides to install Gurobi.

2. Installation Guide for Windows
2.1 Generating and Installing a Gurobi License

9. Open the “Command Prompt”* of your device and enter the copied license code.
10. You will be asked where to install the Gurobi license file. Click “Enter”.



* Shortcut: Windows + r ⇨ enter “cmd(.exe)” and click “enter” [(.exe) can be left out]

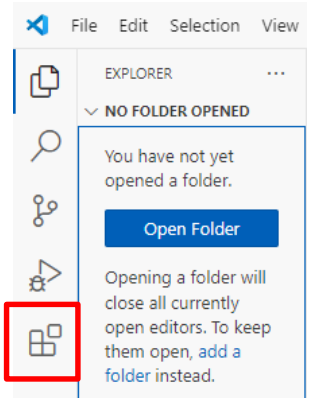
2. Installation Guide for Windows
2.2 Installation of Python

1. Depending on your operating system, choose the correct download file on the Python website.
2. Follow the installation guide (access through “Install now”! – no need for “Customize installation”).

2. Installation Guide for Windows
2.3 Installation of Visual Studio Code (VSC)

1. Choose the correct download file on the VSC-website (depending on your operating system).
2. Follow the installation guide

   Recommendation: Under “Select Additional Tasks” (step 4), select the creation of a desktop icon.
3. Open VSC.
4. Open Extensions.



2. Installation Guide for Windows
2.3 Installation of Visual Studio Code (VSC)

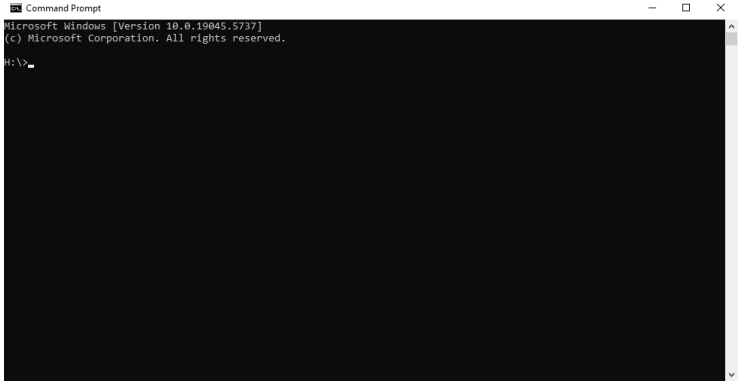
5. Under “Search for Extensions in Marketplace”, install the following extensions:

- Download **Jupyter** as extension.
- Download as extensions (will be downloaded automatically with Jupyter):
  - Jupyter Cell Tags
  - Jupyter Keymap
  - Jupyter Notebook Renderers
  - Jupyter Slide Show

- Download **Python** as extension.
- Download Pylance and Python Debugger as extensions (will be downloaded automatically with Python)

2. Installation Guide for Windows
2.4 Installation of Gurobi in Python

1. Open “Command Prompt”.
2. Enter: “python –m pip install gurobipy”. Confirm with “Enter”.
3. Updating pip: “python.exe –m pip install --upgrade pip”. Confirm with “Enter”.



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3. Installation Guide for MacOS
3.1 Generating und Installing a Gurobi License

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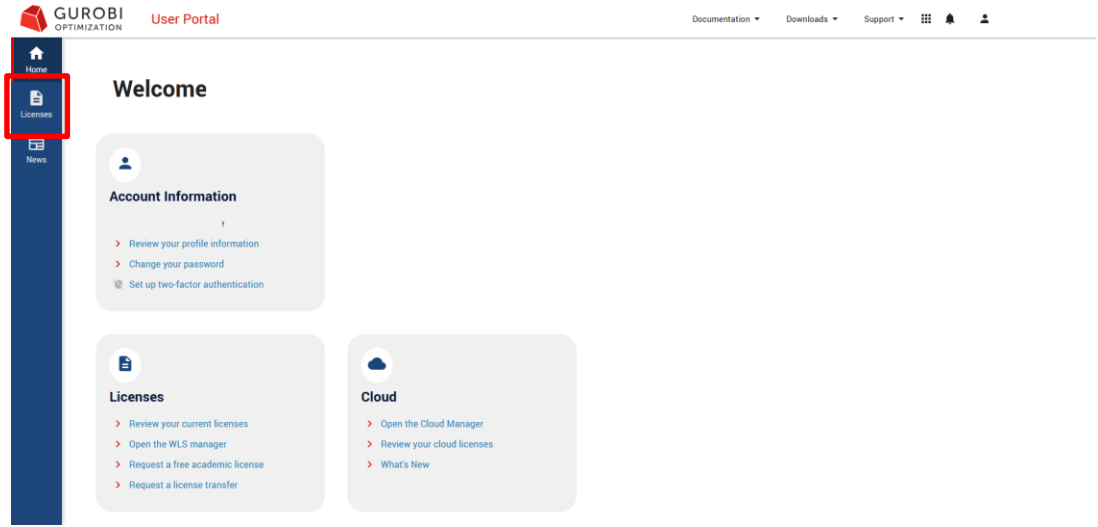
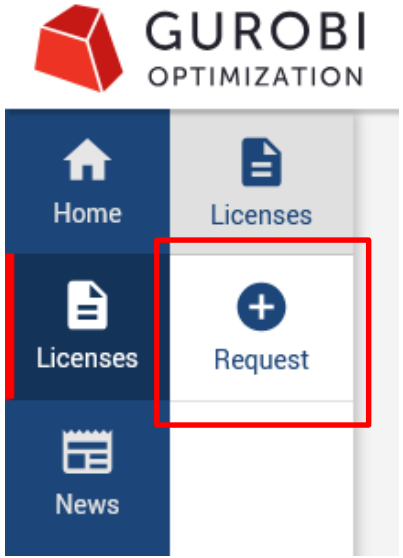
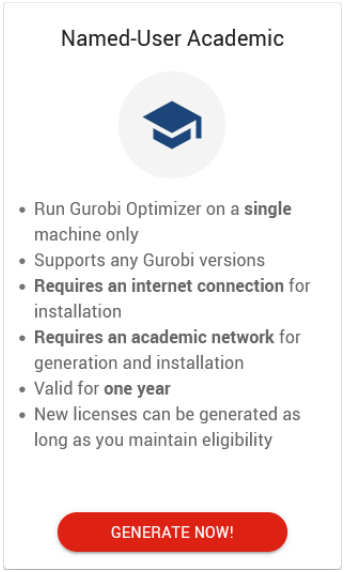


3. Installation Guide for MacOS
3.1 Generating und Installing a Gurobi License

3. Click on “Request” to request a new license and choose “Named-User Academic” as Gurobi license.





3. Installation Guide for MacOS
3.1 Generating und Installing a Gurobi License

4. Click on “CONFIRM REQUEST” in the pop-up window (confirms the end user license agreement).
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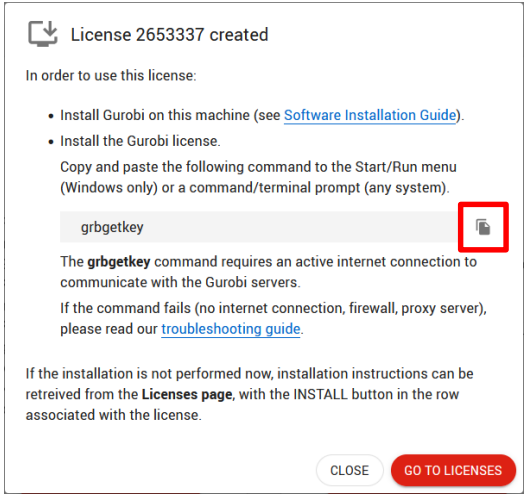

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3.1 Generating und Installing a Gurobi License

7. Download and installation of Gurobi
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8. Follow the installation guides to install Gurobi.

3. Installation Guide for MacOS
3.1 Generating und Installing a Gurobi License

9. Open the “Terminal”*. Enter the copied license code and confirm with “Enter”.
10. You will be asked where to install the Gurobi license file. Click “Enter”.

*Shortcut: command + spacebar ⇨ enter “Terminal” and confirm with “Enter”

3. Installation Guide for MacOS
3.2 Installation of Python

1. Depending on your operating system, choose the correct download file on the Python website.
2. Follow the installation guide (access through “Install now”! – no need for “Customize installation”).

3. Installation für MacOS
3.3 Installation von Anaconda

1. Select the download file for the Graphical Installer under https://www.anaconda.com/download/success
2. Follow the installation guide.

3. Installation für MacOS
3.3 Installation von Anaconda

1. Open “Terminal” and enter the following commands. Confirm each with “Enter”:

   conda config --add channels https://conda.anaconda.orga/gurobi

   conda install gurobi

2. Confirm the place where to save the file to with “Enter”.

3. Installation Guide for MacOS
3.4 Installation of Visual Studio Code (VSC)

1. Choose the correct download file on the VSC-website (depending on your operating system).
2. Follow the installation guide

   Recommendation: Under “Select Additional Tasks” (step 4), select the creation of a desktop icon.
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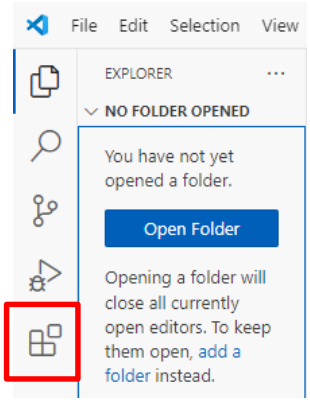

3. Installation Guide for MacOS
3.4 Installation of Visual Studio Code (VSC)

5. Under “Search for Extensions in Marketplace”, install the following extensions:

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- Download as extensions (will be downloaded automatically with Jupyter):
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- Download **Python** as extension.
- Download Pylance and Python Debugger as extensions (will be downloaded automatically with Python)

All programs should now be installed and running.

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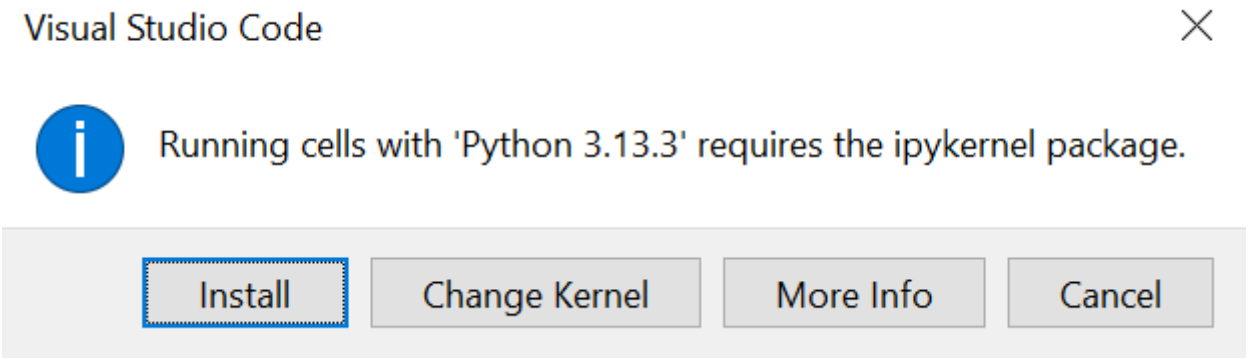
If code is applied, it is possible that the following message pops up in VSC:



This package should be installed. Otherwise, the newest version of Python cannot be used.

4. Additional Usage Instructions

Creating a File

- It is recommended to work with/ in jupyternotebooks (.ipynb). To do so, choose this file format up in the middle of VSC after opening a file.

- The code can now be written and (depending on your wishes) structured in different cells.

- To run the codes, click on the arrow left of the cell or on the double arrow up in the taskbar.

- During the first application of VSC, the program will ask for the environment in which Python shall be initialized. Select “python environments” and choose the Python version, which indicated “/opt/anaconda3/bin/python” as path.