

■■■ Vollständige Buildozer & Kivy Garden Graph Setup-Anleitung (Stand 2025)

Ziel: Reproduzierbarer Android-Build unter Linux Mint / Colab mit funktionierendem SSL, Hostpython, Garden.Graph und Matplotlib.



1 ■■■ Systemvoraussetzungen (global installieren)



```
sudo apt update
```

```
sudo apt install -y build-essential python3-dev git libssl-dev libffi-dev openssl pkg-config libbz2-dev  
libreadline-dev libsqlite3-dev libncurses5-dev libgdbm-dev zlib1g-dev liblzma-dev libjpeg-dev  
libfreetype6-dev libgl1-mesa-dev libgles2-mesa-dev gstreamer1.0-plugins-base  
libgstreamer1.0-dev libmtdev-dev
```



2 ■■■ Virtuelle Umgebung anlegen und aktivieren



```
cd ~/vivosun-setup4
```

```
python3 -m venv venv
```

```
source venv/bin/activate
```



3 ■■■ Python-Pakete installieren



```
pip install --upgrade pip setuptools wheel
```

```
pip install kivy matplotlib
```

```
# Garden Graph manuell klonen (funktionierende Version)
```

```
git clone https://github.com/kivy-garden/garden.graph.git ~/.kivy/garden/garden.graph
```



4 ■■■ Test



```
python -c "from kivy.garden.graph import Graph; print('■ Garden Graph aktiv!')"
```



5 ■■■ Buildozer vorbereiten



```
pip install buildozer
```

```
git clone https://github.com/kivy/python-for-android.git ~/python-for-android --depth=1
```



6 ■■■ Buildozer-Konfiguration (buildozer.spec)



```
requirements = python3,kivy,matplotlib
```

```
android.api = 33
```

```
android.minapi = 29
```

```
android.ndk_path = /home/domi/.buildozer/android/platform/android-ndk-r23b
```

```
p4a.source_dir = ~/python-for-android
```

```
p4a.build_threads = 6
```



7 ■■■ Garden lokal ins Projekt kopieren



```
cp -r ~/.kivy/garden/garden.graph ./garden/
```



8 ■■■ Hostpython/SSL-Fehler vermeiden



```
sudo apt install -y libssl-dev libffi-dev openssl
```

```
rm -rf ~/.buildozer/android/platform/build-arm64-v8a/build/other_builds/hostpython3
```



9 ■■■ Build starten



```
buildozer android clean
```

```
buildozer android debug
```



■ Ergebnis



→ APK wird erstellt mit funktionierendem SSL, Garden Graph, Matplotlib.

→ Reproduzierbar durch requirements_buildozer.txt und systemlibs.