

To **install your Java application** (built with GeoTools 33.0 and GDAL 3.2.0) on a **Ubuntu machine**, follow these structured steps:

✅ 1. Install Java (JDK 17 or later)

GeoTools 33.0 and GDAL bindings require Java 11+, ideally Java 17.

```
sudo apt update
```

```
sudo apt install openjdk-17-jdk
```

Verify installation:

```
java -version
```

✅ 2. Install GDAL 3.2.0

Ubuntu default repositories might have a newer GDAL, but you need specifically **3.2.0**.

Option A: Build GDAL 3.2.0 from source

```
sudo apt install build-essential cmake git
```

```
sudo apt install libproj-dev libgeos-dev libtiff-dev libjpeg-dev libpng-dev libcurl4-openssl-dev
```

```
# Download GDAL 3.2.0 source
```

```
wget https://download.osgeo.org/gdal/3.2.0/gdal-3.2.0.tar.gz
```

```
tar -xzf gdal-3.2.0.tar.gz
```

```
cd gdal-3.2.0
```

```
./configure --prefix=/usr/local/gdal32
```

```
make -j$(nproc)
```

```
sudo make install
```

Set environment variables:

```
echo 'export GDAL_HOME=/usr/local/gdal32' >> ~/.bashrc
```

```
echo 'export PATH=$GDAL_HOME/bin:$PATH' >> ~/.bashrc
```

```
echo 'export LD_LIBRARY_PATH=$GDAL_HOME/lib:$LD_LIBRARY_PATH' >> ~/.bashrc
```

```
echo 'export GDAL_DATA=$GDAL_HOME/share/gdal' >> ~/.bashrc
```

```
source ~/.bashrc
```

Confirm installation:

gdalinfo --version

Should return: GDAL 3.2.0

✓ 3. Transfer your Java Application

You should transfer the following from your Windows build:

- RadarLOSTApp.jar
- lib/ folder (all dependency jars)
- (Optional) any input tiles, data files, configs

You can use:

```
scp -r RadarLOSTApp.jar lib/ username@ubuntu:/home/username/myApp/
```

Or a USB drive.

✓ 4. Run the Application

On the Ubuntu machine:

```
cd ~/myApp
```

```
java -jar RadarLOSTApp.jar
```

If you get errors like `ClassNotFoundException`, it may be due to an incorrect Class-Path in `manifest.txt`. To debug, try:

```
java -cp "RadarLOSTApp.jar:lib/*" Main
```

(Use `:` as separator on Linux instead of `;`.)

✓ 5. (Optional) Create a .desktop shortcut or script

Create a simple `run.sh` launcher:

```
#!/bin/bash
```

```
cd "$(dirname "$0")"
```

```
java -jar RadarLOSTApp.jar
```

Make it executable:

```
chmod +x run.sh
```

✓ 6. (Optional) Create a .desktop App Launcher

For GUI launch:

[Desktop Entry]

Name=Radar LOS App

Exec=/home/username/myApp/run.sh

Icon=utilities-terminal

Terminal=false

Type=Application

Categories=Utility;

Save as: ~/.local/share/applications/radar-los.desktop and make it executable.

Would you like a .deb installer generated too (for a more native feel)?