Wavelet Prosody Toolkit

Installation Guide

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This guide provides **cross-platform installation instructions** for the *Wavelet Prosody Toolkit* on Windows, macOS, and Linux. Two installation methods are provided: a global user-level installation for general use across multiple projects, and a per-project installation with isolated dependencies for reproducible research environments.

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1 Introduction

The `Wavelet Prosody Toolkit` is a powerful tool for analysing prosodic features in speech. This guide helps you install it on Windows, macOS, or Linux, but no guarantees are made. It describes files that are included in the installation package, pertaining to two installation methods: a global user-level installation and a per-project installation.

You can download the installation scripts from here: ....

1.1 Support

For installation issues, please email Eirik Tengesdal at `eirik.tengesdal@oslomet.no`.

2 Which Installation Method?[1]

2.1 Global Installation (recommended):

- Windows: `install_toolkit_standalone.ps1`
- macOS/Linux: `install_toolkit_standalone.sh`
- Use across multiple projects without reinstalling

2.2 Per-Project Installation:

- Windows: `install_toolkit_project.ps1`
- macOS/Linux: `install_toolkit_project.sh`
- Isolated dependencies and strict reproducibility

[1] For most users, the **global installation** is simpler and more convenient. Use per-project only when you need strict dependency isolation.

3 Option 1: Global User-Level Installation

This installs the toolkit once to your user Python environment, making it available from any directory.

Default Locations:Windows: %USERPROFILE%wavelet_prosody_toolkitmacOS/Linux: /wavelet_prosody_toolkit

3.1 Installation

3.1.1 Windows (PowerShell)

```powershell
# Navigate to where you downloaded the script
cd path\to\scripts

# Install to default location
.\install_toolkit_standalone.ps1

# OR install to custom location
.\install_toolkit_standalone.ps1 -InstallDir "C:\Tools\wavelet_prosody_toolkit"
```

3.1.2 macOS/Linux (Bash)

```shell
# Make script executable
chmod +x install_toolkit_standalone.sh

# Install to default location
./install_toolkit_standalone.sh

# OR install to custom location
./install_toolkit_standalone.sh /path/to/your/preferred/location
```

3.2 Usage

After installation, you can use the toolkit from **any directory**:

3.2.1 Windows

```powershell
# Launch the GUI
python -m wavelet_prosody_toolkit.wavelet_gui

# Or use in your Python scripts
python your_analysis_script.py
```

3.2.2 macOS/Linux

```shell
# Launch the GUI
python3 -m wavelet_prosody_toolkit.wavelet_gui

# Or use in your Python scripts
python3 your_analysis_script.py
```

Python Usage

In your Python code (all platforms):

```python
import wavelet_prosody_toolkit
# Use toolkit functions
```

3.3 Updating the Toolkit

3.3.1 Windows

```powershell
cd $HOME\wavelet_prosody_toolkit
git pull
```

3.3.2 macOS/Linux

```shell
cd ~/wavelet_prosody_toolkit
git pull
```

4 Option 2: Per-Project Installation[2]

This creates a project-specific installation with its own virtual environment.

[2] Use this method when you need isolated dependencies for reproducible research environments.

4.1 Installation

4.1.1 Windows (PowerShell)

```powershell
# In your project directory
.\install_toolkit_project.ps1
```

4.1.2 macOS/Linux (Bash)

```shell
# In your project directory
chmod +x install_toolkit_project.sh
./install_toolkit_project.sh
```

4.2 Usage

4.2.1 Windows

Virtual EnvironmentThe toolkit is installed in an isolated environment (.venv) within your project directory.

```powershell
# Activate the virtual environment
.\.venv\Scripts\Activate.ps1

# Launch the GUI
python -m wavelet_prosody_toolkit.wavelet_gui

# Run your analysis scripts
python your_analysis_script.py
```

4.2.2 macOS/Linux

```shell
# Activate the virtual environment
source .venv/bin/activate

# Launch the GUI
python -m wavelet_prosody_toolkit.wavelet_gui

# Run your analysis scripts
python your_analysis_script.py
```

4.3 Updating the Toolkit

4.3.1 Windows

```powershell
cd vendor\wavelet_prosody_toolkit
git pull
```

4.3.2 macOS/Linux

```shell
cd vendor/wavelet_prosody_toolkit
git pull
```

5 Prerequisites

Before running either script, ensure you have the following installed:

5.1 All Platforms

5.1.1 Python 3

Windows:

```powershell
python --version
```

Download from: `python.org/downloads`

macOS/Linux:

```shell
python3 --version
```

Python Version:Python 3.8 or later is recommended. The toolkit may work with earlier versions but has not been tested.

5.1.2 Git

Windows:

```powershell
git --version
```

Download from: `git-scm.com/download/win`

macOS/Linux:

```shell
git --version
```

5.2 Platform-Specific

5.2.1 macOS Only

Xcode Command Line Tools:

```shell
xcode-select --install
```

5.2.2 Windows Only

Microsoft C++ Build Tools (if PyQt6 fails to install):

- Download `Visual Studio Build Tools`
- Select «Desktop development with C++»

Dependencies:The following packages will be automatically installed:PyWaveletsscipynum

6 Quick Start Example

6.1 Global Installation

6.1.1 Windows

```powershell
# Install once
.\install_toolkit_standalone.ps1

# Navigate to your project
cd C:\Users\YourName\my_prosody_analysis

# Create your analysis script
@"
import wavelet_prosody_toolkit as wpt
# Your analysis code here
"@ | Out-File -Encoding utf8 analyze.py

# Run it
python analyze.py
```

6.1.2 macOS/Linux

```shell
# Install once
./install_toolkit_standalone.sh

# Navigate to your project
cd ~/my_prosody_analysis

# Create your analysis script
cat > analyze.py << 'EOF'
import wavelet_prosody_toolkit as wpt
# Your analysis code here
EOF

# Run it
python3 analyze.py
```

6.2 Per-Project Installation

6.2.1 Windows

```powershell
# In your project directory
.\install_toolkit_project.ps1

# Activate environment
.\.venv\Scripts\Activate.ps1

# Create and run your analysis
python analyze.py
```

6.2.2 macOS/Linux

```shell
# In your project directory
./install_toolkit_project.sh

# Activate environment
source .venv/bin/activate

# Create and run your analysis
python analyze.py
```

7 Summary of Installation Files

The following table summarises the installation scripts included in this package:

Purpose	Windows	macOS/Linux
Global installation	`install_toolkit_standalone.ps1`	`install_toolkit_standalone.sh`
Per-project installation	`install_toolkit_project.ps1`	`install_toolkit_project.sh`

File Distribution:All files are included in the distribution package and can be used independently.

Support:For issues specific to the toolkit itself (not installation), please refer to the GitHub repository's issue tracker.

8 Additional Resources

Test for Additional Resources:

- **Toolkit Repository**: `github.com/asuni/wavelet_prosody_toolkit`
- **Installation Method**: pip install in editable mode (allows toolkit updates via `git pull`)
- **Installation Type**: User-level (no admin/sudo required)

Acknowledgements

This installation package was created to facilitate the use of the Wavelet Prosody Toolkit across different operating systems and

research environments. Special thanks to the toolkit developers and the Python scientific computing community.