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.

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?

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

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Virtual Environment

The toolkit is installed in an isolated environment (`.venv`) within your project directory.

Python Version

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

Support

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

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_toolkit`
- macOS/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)

```bash
# 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

```bash
# 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):

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

3.3 Updating the Toolkit

3.3.1 Windows

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

3.3.2 macOS/Linux

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

4 Option 2: Per-Project Installation

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

4.1 Installation

4.1.1 Windows (PowerShell)

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

4.1.2 macOS/Linux (Bash)

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

4.2 Usage

4.2.1 Windows

```
# 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
```

Virtual Environment

The toolkit is installed in an isolated environment (`.venv`) within your project directory.

4.2.2 macOS/Linux

```
# 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

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

4.3.2 macOS/Linux

```
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:

```
python --version
```

Download from: `python.org/downloads`

macOS/Linux:

```
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:

```
git --version
```

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

macOS/Linux:

```
git --version
```

5.2 Platform-Specific

5.2.1 macOS Only

Xcode Command Line Tools:

```
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++”

6 Quick Start Example

6.1 Global Installation

6.1.1 Windows

```
# 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
```

Dependencies

The following packages will be automatically installed:

- PyWavelets
- scipy
- numpy
- matplotlib
- PyQt6

6.1.2 macOS/Linux

```bash
# 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

```bash
# 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`

8 *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)

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.

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.