

Aruspix Development Set up

May 6, 2008

Three libraries must be downloaded and compiled in order to be able to compile Aruspix. They are the following:

- wxWidgets 2.8.3 (<http://www.wxwidgets.org/>)
- IM (<http://www.tecgraf.puc-rio.br/im/>)
- Torch(<http://www.torch.ch/>)

1 wxWidgets Compilation

Note: wxWidgets must be compiled using the MacOSX 10.4u sdk to enable Aruspix use with both Mac OS 10.4 and 10.5.

1. Create two directories within the wxWidgets directory: osx-static, osx-static-debug.
2. In the osx-static-debug directory run the following commands to compile for debug mode:

```
../configure --disable-shared --enable-debug --with-libjpeg=builtin --with-libpng=builtin
--with-macosx-sdk=/Developer/SDKs/MacOSX10.4u.sdk
clean
make
```

3. In the osx-static directory run the following commands to compile for release mode:

```
../configure --disable-shared --enable-universal_binary --with-libjpeg=builtin
--with-libpng=builtin --with-macosx-sdk=/Developer/SDKs/MacOSX10.4u.sdk
clean
make
```

2 Aruspix Compilation

2.1 Setting Aruspix Environment Variables

In the aruspix/osx directory you will find an XML file named enviroment.plist. This file is used by Xcode to set the following environment variables for linking purposes:

- ARUSPIX: Location of Aruspix project directory.
- ARUSPIX_IMLIB: Location of IM library.
- ARUSPIX_TORCH: Location of Torch library.

- ARUSPIX_WX: Location of wxWidgets library.
- ARUSPIX_WX_VERSION: wxWidgets library version number.

environment.plist prototype:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
<dict>
  <key>ARUSPIX</key>
  <string>/Users/puginl/projects/aruspix</string>
  <key>ARUSPIX_IMLIB</key>
  <string>/Users/puginl/libs/imlib</string>
  <key>ARUSPIX_TORCH</key>
  <string>/Users/puginl/libs/Torch3</string>
  <key>ARUSPIX_WX</key>
  <string>/Users/puginl/libs/wx2.8.7</string>
  <key>ARUSPIX_WX_VERSION</key>
  <string>2.8</string>
</dict>
</plist>
```

1. You must modify the paths within this file to match your directory structure.
2. In the home directory create the following hidden directory: .MacOSX.
3. Now copy the modified environment.plist file into the .MacOSX directory.
4. You must now log out and log back in.

2.2 Compilation of Machine Learning Executables used by Aruspix

1. Open aruspix/osx/torch.xcodeproj with Xcode.
2. Compile the following executables in both release and debug mode: adapt, decoder, ngram.

Open aruspix/osx/aruspix.xcodeproj with Xcode.

Now Aruspix is ready to be compiled in both Debug and Release mode.