Dr. Cristián Maureira-Fredes, Manager Research & Development, The Qt Company

Cristián has been a Python enthusiast for more than 10 years, and due to his academic background he has been using it in different topics like Image Processing, Artificial Intelligence, Robotics, Data Science, and Astrophysics. Currently he is a Manager of Research & Development, Team lead for the QtCore, QML and Qt for Python teams, and continues as a Software Engineer at the Qt Company working on the Qt for Python project.
Paul Miller, Principal Engineer, Silhouette FX (Acquired by Boris FX)

Paul Miller has developed widely-used applications for the VFX industry for almost 30 years. In 2019 he was awarded an Emmy and Academy Award for his design and development of the Silhouette rotoscoping, digital paint, and compositing system. His company, Silhouette FX, was recently acquired by Boris FX.
Embracing

From Prototypes to hybrid Applications

Dr. Cristián Maureira-Fredes
Outline

- **Setup**
  - Installation
  - Building from source
- **PySide**
  - Widget based app (.ui, .qrc)
  - QML interaction
  - Other Python modules
- **Shiboken**
  - C++ module to Python
  - C++/Python application
before we start

What's the deal with Python?
Webinars & Conferences 📚

- Creating user interfaces with Qt for Python
- Develop your first Qt for Python Application
- Python and C++ interoperability with Shiboken
- and many others!

doc.qt.io/qtforpython/videos.html
Documentation 💼

- General: doc.qt.io/qtforpython
- Shiboken: doc.qt.io/qtforpython/shiboken2
- Resources: resources.qt.io
- In progress
  - Video tutorials (Build, Contributing, etc)
  - Qt Creator example gallery
  - More tutorials and examples!
Binding generation

Qt Headers ← Clang → PySide2

Typesystem → Shiboken2 → CPython
Setup
Installing **PySide**

```bash
pip install pyside2
```

What does that install?

- **PySide2**
  - Qt modules
  - pyside2-designer
  - pyside2-rcc
  - pyside2-uic
- **Shiboken2** (module)
  - shiboken2
- **Shiboken2_Generator** (exe)
  - shiboken2
Installing Shiboken Generator

the simple way

pip install \
  --index-url=http://download.qt.io/official_releases/QtForPython/ \
  --trusted-host download.qt.io \
  shiboken2 pyside2 shiboken2_generator

But one needs to:

- Set `CLANG_INSTALL_DIR` to the libclang directory
- Add to `PATH` a Qt bin path with the same version
- Add to `LD_LIBRARY_PATH` the Qt lib path with the same version
Installing Shiboken Generator the hard way?

- Set `CLANG_INSTALL_DIR` to the libclang directory

```
python setup.py install
# there are many other options!
```

doc.qt.io/qtforpython/gettingstarted.html
before jumping into the examples

Which IDE should I use?
IDEs support

- Visual Studio Code
- Visual Studio
- PyCharm
- Spyder
- Vim
Let's look at some code

https://maureira.xyz/qtvts2020/code
Resources

• Technical Vision 🕵️‍♂️
  qt.io/blog/2019/08/19/technical-vision-qt-python
• Documentation 📚
  doc.qt.io/qtforpython
• Blogs, Webinars, Conferences, and more 🎉
  resources.qt.io
What's our current state?

- Released **M2M Protocols** wheels for commercial users 🏥.
- Got rid of a set of **nasty bugs** related to threading 🐜
- Catching up with **Qt6** 💪
What's next?

- Currently in active development 🧠💻
- Improvements to the documentation 📚
- A campaign to add more examples started 😄
- Tooling to improve our lives 🔧
- Continue extending our commercial offering 🎉
but most importantly...

What do you need?

we are community driven.

🌟

bugreports.qt.io
Q&A

Let's talk!

IRC
#qt-pyside on Freenode
Matrix
#qt-pyside:matrix.org

Telegram
 t.me/qtforpython

Gitter
gitter.im/PySide/pyside2
Scripting Silhouette

Python for VFX with Qt for Python
Boris FX

- Applications and plugins for VFX
- Most written at least in part with Qt & Python
Silhouette

- Industry standard rotoscoping and paint since 2005
- Hundreds of feature films and television shows
- Stereo conversion of feature film
- Academy Award, Emmy recipient
- Highly extensible and customizable using Python
Silhouette and Qt

- Widgets-based desktop application
- Embedded Python interpreter
- Built-in Python console
- Built-in script editor
- PySide2
Demo
Extending Silhouette with Qt for Python
Learn more - Embracing Qt for Python

SIGGRAPH 2020
AUG 25-27
Book a meeting

Try Qt: https://www.qt.io/download
Qt for Python: https://www.qt.io/qt-for-python
Qt for Python Resources: https://resources.qt.io/qt-for-python-2
Technical Vision: https://www.qt.io/blog/2019/08/19/technical-vision-qt-python
Documentation: https://doc.qt.io/qtforpython/
Blogs, Webinars, Conferences and more 🌟: https://resources.qt.io/
Contact us: https://www.qt.io/contact-us
  - IRC: #qt-pyside on Freedenode
  - Matrix: #qt-pyside:matrix.org
  - Telegram: t.me/qtforpython
  - Gitter: gutter.im/PySide/pyside2

Book a meeting: https://www.qt.io/events/siggraph-2020-1586987037
SIGGRAPH 2020
AUG 25-27
Thank you

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https://www.qt.io/contact-us