Python/C++ Hybrid Systems

When and how to extend

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Who am I? Why I'm here?

Developer

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When to extend?

Dynamic VS Static typed languages

- Static typing enable compilers to fully optimize code
    - e. g. C, C++, Rust
- Dynamic typing enables languages to be expressive
    - e. g. Python, Javascript

Which one to chose?

IO bound VS CPU bound procedures

- CPU bound procedure - heavy local computation
  - e. g. Scene rendering, signal processing...
- IO bound procedure - exchange of data with external service
  - e. g. Database transaction, third party API call...

Good way to choose!

How to extend?

Python/C++ hybrid systems

- Main project in Python with C++ extensions (native modules)
  - CPython API / BoostPython (Binding generator)
- Main project in C++ with python scripting embedded