

Streamrip Refactor

Goals

- Improve performance. Right now, when using Python's concurrency facilities, CPU usage is far too high. Startup time is also too high. Such a simple program should be very lightweight.
- Improve maintainability: Although the python script is modularized, the dependencies dependency graph is very complicated.
- Properly use interfaces: Currently there are too many `if client.source == x`. The clients should convert the responses into a universal form right when they receive the data. There should not be patches littered throughout the program in the form of `if` statements.
- Better support for asynchronous code

Design

Enums

```
enum MediaType {  
    Album,  
    Artist,  
    Label,  
    Playlist,  
    Track,  
    Video,  
}
```

Client

The client trait defines: - `authenticate(auth_info: AuthenticationInfo):` do any necessary authentication - `search(query: String):` search for a query - `get_metadata(id: String, type: Media)`