Open Source Face Recognition

Josh Klontz
Noblis
A typical face recognition algorithm

Detection
- Viola & Jones
- Felzenszwalb

Normalization
- Cootes
- Tan & Triggs

Representation
- Lowe
- Ahonen

Extraction
- Turk & Pentland
- Belhumeur & Kriegman

Observations
- Research focuses on isolated steps
- Few implementations of complete systems
- Engineers must piece together components

Issues
- Unclear how new ideas interact
- Barrier to entry to test new ideas
The biometrics community doesn’t have a communal open source framework of its’ own.
What’s in it?

**Off-the-shelf algorithms**
- Face Recognition
- Gender & Age
- Commercial Wrappers
- Other Algorithms

**Systems engineering**
- Enroll & Compare
- Serialization
- Parallelization
- Fusion & Clustering

**Algorithm evaluation**
- Standardized workflow
- Plot generation
- Command line interface

**Algorithm development**
- C++ plugin API
- Embedded grammar
- Model training
Everyone with an image has an image recognition problem.

When did they associate?

Where else is he?

What is he doing?

Who are they?
A Domain Specific Language for Visual Recognition

Live Coding (Programmer Productivity)

Heterogeneous Architectures (Hardware Productivity)
www.openbiometrics.org

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