

Æther: Digital Interactivity System

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What is Æther?

- Framework for easily developing interactive applications (i.e. *games*)
- Utilizes input from diverse sources (e.g. camera, IR, accelerometer, & c.)
- Rapid prototyping environment for external input sources

What does it do?

- Use your shadow as input to a computer program
 - Fun (EncouragerModule, CatchOSIfUCan, TileMosaic)
 - Physics simulations
- Laser pointer detection:
 - Control presentations (you're watching it!)
 - Play space-invaders type games
- Face Detection:
 - Put masks on people (TikiMasks)
 - Show who's been in a building (FaceTiler)
 - Which faculty member do you most look like?

How does it work?

- Written in Python using the pygame package and opencv
- Developers write *modules* that fit into the Æther framework
- Input is provided through *chains* composed of transforms, which hide the details of input capture

Why is this Computer Science?

- Intersection of many computer related fields including (but not limited to):
 - Computer vision and graphics
 - Software engineering
 - Human Computer Interaction
 - Game development
- Provides an easy way to develop applications with unconventional/novel input methods
- Implements good software engineering and project management practices
 - version control
 - bug tracking
 - modular code design
- It's really cool

THIS.....is Computer Science