

Semester Project

**Programming Models for Emerging
Platforms**

Semester Project

- Chance for you to explore an emerging model of your choosing
- Meant to force you to learn something new on your own
- Not meant to have strict guidelines...
 - Real world programming involves a general sense of direction, but the specifics of a project are often discovered over time

Rough Requirements

- 1. Pick an emerging programming model and/or platform
 - We will discuss GPU programming, Android Programming, UAV programming after break
- 2. Use the model/platform to build some application that demonstrates that (A) you have learned something new, and (B) explored a new idea / direction
 - Each student/group will meet with me first to discuss what minimum working example is needed.
- 3. You may work alone, or in groups of two. If you work in a group of 2, all members will receive the same grade.

Suggestions for Frameworks

- Concurrent / Parallel Programming
 - OpenMP, Actors (Java / Scala Akka)
- Web
 - React, AngularJS, NodeJS
- Android Development
 - React Native, Go for Mobile
- Systems Programming
 - Rust
- GPU Programming
 - Game development (any game engine), parallel programming with GPU

An Example

- Model : Scala Actors (Akka)
- Showcase : Concurrent programming
- Application : I will use akka to make a mini version of “twitter”.
 - In my application, an actor can follow other actors, and post tweets. If anyone an actor is following posts a tweet, the actor will receive the message.

Dates

- 3/18 – 3/22 (Spring Break) : Please consider what you will work on.
- 3/25 – 3/29 : Each student/group will meet with me to discuss and agree upon what will be worked on. I will send out an email about scheduling.
- Last week of classes : Each student/group will meet with me to showcase their project.