Lecture Notes
September 4, 2018 First day of class!

- Canvas Home Page
- Piazza - everyone needs to sign up
- CVN Videos will be available to on-campus students (CVN posts within 24 hours after class session)
- Assignments - submit all assignments in canvas unless the assignment says otherwise
- Files - lecture notes, sample projects, some of the readings, other background
- Textbook - Chapters from parts 1 and 3 of the **second edition** will be assigned as readings (no readings from part 2). The textbook authors have posted additional material at https://cs.gmu.edu/~offutt/softwaretest/. All other assigned readings will be "for free", either freely available to everyone online, available free with uni/password via Columbia's digital libraries, or provided as pdfs inside canvas files
- Calendar - lecture notes "live links", check for required in-class exercises

In-class exercise if time permits:

- Group together in teams of ~4 with whoever is sitting near you, get some paper
- Devise a list of specific *requirements* for a drone that repeatedly flies around the classroom, just below the ceiling, and uses its ***sensors*** to determine which students are "paying attention" and which are not
    - High-resolution camera with very advanced image/video processing and recognition
    - Sensitive microphone with very advanced speech/sound processing and understanding
    - Wifi monitoring - it can determine precise location of any devices in room that are actively sending/receiving data (but cannot read contents of encrypted data streams),
    - Etc.
- Focus on how the software executing in the drone determines whether or not individual students are "paying attention", not how it avoids running into obstacles, utilizes battery power, etc.

Ten minutes

Volunteers present their requirements to class

Now return to your team, and develop an *acceptance testing plan* for how you will test the drone software to make sure it works properly on both common cases and corner cases (if it doesn't, it is not acceptable)

- There is no perfect specification for "paying attention", with binary yes/no response
- But the drone software should make best effort to avoid reporting *false negatives* (fails to report a student who is not paying attention)
- or *false positives* (reports student as not paying attention when indeed she is)

Five minutes

Volunteers present their testing plans to class

In this class, you will form your own teams (of 4 students) and develop your own choice of team project (within constraints) - starting with requirements and acceptance testing plan, then design, code, internal testing plans, actual testing.

Read for Thursday:

"Waterfall vs. Agile: Which is the Right Development Methodology for Your Project?"

And

- What is Agile?
- How does it work?
- How is it different?
- Agile Myths
- Agile vs Waterfall