ECE 595: Advanced Software Engineering

Project Overview

Prof. James Davis

Course project

- 60% of your course final grade
- Teams of 3-4
- Semi-open-ended *topic*
- *S*tructured *format*
- Two types of projects: Research & Practice
- Some description now
- More details on Wednesday

Important dates

1. Interest survey (1/10)
2. Team composition (1/12)
3. Proposal sketch
4. Proposal
5. Several milestones
6. Final report rough draft (pre-Quiet week)
7. Final report (Finals

Project sign-up sheet

- Sign-ups: https://docs.google.com/spreadsheets/d/10yaYbSMqenkUd8MuScPvMQ5IldvigEv-h1uuzLnYh64/edit#gid=0

- Research project descriptions: https://docs.google.com/document/d/1Pgwytsntvr2QpOzfo4QLj9cfCPr79hTRnjYt3f_EIAc/edit

Example past projects

- OSS engineering type
  - Micropython extensions (PRs: #8253, #8480, #8479, #8503, #8552, #8385, #8331, #8299)
  - STRIDE analysis of Docker
  - ClimaCARLA
- Research type (links are to the published peer-reviewed papers)
  - Model zoo discrepancy measurements
  - Replication of DeepBugs
  - Engineering and Security Practices for ML-based IoT Devices
  - Incorporating Failure Knowledge into Design Decisions for IoT Systems: A Controlled Experiment on Novices
  - Reflections on software failure analysis

Project assessment

- Individual contributions
- Team contribution
- Written and oral components
- Artifact examination
- Milestones milestones milestones

Prepping for next part of course

IEC 61508 access

- See announcement on Brightspace for instructions
- Please do this by Friday