EC601 2020 Class Plan

Osama Alshaykh
Class Objectives

- Prepare you to be a system engineer by understanding
  - Product formation: how can you take an idea and make it into a product
  - Product analysis: competitive analysis, landscape analysis
  - Development of use cases
  - Use Case Development: Translation of use cases into system and engineering requirements resulting in system architecture
  - Product Testing: How to test your product
  - Concept Validation: How to validate concepts
  - After-launch: Maintain, monitor and upgrade products

- Agile development
- Being part of a Team, leading a team and public presentation
- Utilizing resources in building products: Open Source, Cloud and third parties
Class Style

● Self-learning
  ○ You need to research, read and train yourself with help from us.

● Agile Learning and development

● Every lecture includes
  ○ Presentation (in class: 30 minutes)
  ○ Working Example (in class: 30 minutes)
  ○ Working together on your Homework or project (online: 30 minutes)

● Multi-team collaboration
  ○ Code Reviews
  ○ Acceptance Report

● Very interactive and you need to present

● Always have your computer with you in class
Class Plan

- In class will be for 1 hour
- We will have open office hours for support
- We will have TA assigned for groups
- Introduce the ambassadors
All online

- All your homeworks, documents and projects must be on GitHub
- Your GitHub account is required
- The next week, focus on becoming familiar with Github and principles of code management and agile development
Class Plan

Team Project (Teams of two)

Sprint 1

Project 1
Product and research review

Project 2
Social Media product development using third party systems

Project 3
Major Open-Source project case study

Project 4
App development + automated-testing

Project 5
Societal Impact of Technology

Sprint 2

Sprint 3

Sprint 4

Sprint 5

Group Discussions

Group Discussions

Group Discussions

Poster Presentation
## Grading

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<tr>
<th>Item</th>
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<th>Grade</th>
<th>Totals</th>
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<tbody>
<tr>
<td>Team Grade</td>
<td>Sprints</td>
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<td>Final Deliverable</td>
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<td>Project 1</td>
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<td>Project 5</td>
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<td>Quizzes and Code reviews</td>
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Projects

● Step 1:
  ○ Please select one of the projects.
  ○ Use the following form for your project selection
  ○ If you have your own idea, please use the form to propose it.
  ○ Deadline for selection is Friday September 4th 5:00 PM EST.

● Step 2: Project 1

● Depending on the selections, Osama will assign teams on 9/16.
Project 1

- You can investigate a research or product area. This includes:
  - Understand the essence of the area.
  - Understand the mission and purpose of the research area and the product.
  - Explore product use cases.
- Analyze others contributions to the area including competitive systems and technologies. You should be able to
  - Propose path(s) for moving forward
  - Analyze the positives and shortcomings of the different approaches
- Write a paper about your findings.
- Pick one or multiple approaches that have implementations on open source and at least reproduce their results. Justify your pick
- Due date September 13th end of day: Upload report to blackboard.
- I will read your report and look at your GitHub
Please

- GitHub assignment: Go to blackboard and provide link to your GitHub
Integrity of your work

BU takes academic integrity very seriously. Academic misconduct is conduct by which a student misrepresents his or her academic accomplishments, or impedes other students’ opportunities of being judged fairly for their academic work. Knowingly allowing others to represent your work as their own is as serious an offense as submitting another’s work as your own. More information on BU's Academic Conduct Code, with examples, may be found at http://www.bu.edu/academics/policies/academic-conduct-code
Collaboration

In this class you may use any textbooks or web sources when completing your project, subject to the following strictly enforced conditions:

- You must clearly acknowledge all your sources (including your collaborators) on the top of your project
- You must explain the solution in your own words upon demand
- You may not use any human resource outside of class (including web-based help services, outside tutors, etc.) in doing your projects.
- Failure to meet any of the above conditions could constitute plagiarism and will be considered cheating in this class. If you are not sure whether something is permitted by the course policy, ASK ME! (it's much more awkward to explain your actions after the fact to the college disciplinary committee).
Thank you