EC601 2021 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 a teaching assistant 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

Sprint 1 | Sprint 2 | Sprint 3 | Sprint 4 | Sprint 5
---|---|---|---|---
Poster Presentation

Team Project (Teams of three)

**Project 1**
Product and research review
Major Open-Source project case study

**Project 2**
Social Media product development using third party systems

**Project 3**
Societal Impact of Technology

**Project 4**
App development + automated-testing

**Project 5**
Your Resume

**Group Discussions**
## Grading

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<th>Item</th>
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<th>Grade</th>
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<td>Team Grade</td>
<td>Sprints</td>
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<td>Final Deliverable</td>
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<td><strong>Project 1: Literature and Product Review</strong></td>
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<td><strong>Project 3: Societal Paper</strong></td>
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<td><strong>Project 5: Resume</strong></td>
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<td><strong>Quizzes and Code reviews</strong></td>
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Team Projects

- We will start with project 1. Project 1 is an individual project.
- Due Date: Sunday September 19, 2021
- After Project 1 is completed, teams will be formed based on your interests
- Step 1:
  - Please select one of the projects.
  - Use the following form for you 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
Team Projects

- We will start with project 1. Project 1 is an individual project.
- After Project 1 is completed, teams will be formed based on your interests
- Details:
  - Please select one of the projects.
  - Use the following form for you project selection
  - If you have your own idea, please use the form to propose it.
  - Deadline for selection is Friday September 10th 5:00 PM EST.
Project 1 Expectations

- **Problem Statement:**
  - What does the topic cover?
  - Why it is important?

- **Applications**
  - What are applications of the topic?
  - What is the societal significance of the research?

- **Pick an area of focus that interests you in the topic**

- **Literature review**
  - As comprehensive as you can, research the different approaches and solutions in research community and industry

- **Open Source research**
  - Research the different open source projects that touch the topic of your interest

- **Duplicate the results**
Submission

- Your work must be all done in your GitHub repository
- Put links to your documents in your GitHub repository
- Due Dates: Sunday September 19th, 2021
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