IDC 6940: Capstone in Data Science

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Giri NARASIMHAN

www.cs.fiu.edu/~giri/teach/CapDS-Su20.html

CAP 5510 / CGS 5166

5/21/20

Course Preliminaries

- **Course Webpage:**

http: //www.cs.fiu.edu/~giri/teach/CapDS-Su20.html
  - Lecture Slides; Reading Material; Announcements;
  - VISIT OFTEN!
- **Class will meet at specified times suggested on slide 10**
- **First meeting will be on Thu, May 21**
- **Office Hours: By Appointment Only**
- **Email: giri@cis.fiu.edu**
- **No Final Exam for this class**
- **This is a variable credit course**

Course Plan

- Execute an **industry-relevant** or **research-oriented** project in Data Science
- The project must synthesize concepts from databases, analytics, visualization and management of data.
- The class will meet as specified on Slide 10 tentatively from 4-5 PM
- Class meetings will be used for:
  - Monitoring progress in project and troubleshooting
  - Class presentations
  - Visiting speakers and case histories

Project Overview

- **Individual or team effort.**
  - **Team Size? 1-2**
- **Projects need one or more faculty mentors to identify, plan, outline and execute**
  - **Mentor list? On the course webpage**
- **Projects are encouraged to have an external mentor**
  - **The external mentor may be a domain expert to provide guidance**
- **Projects need a 3-person evaluation committee, including your mentor(s) and at least one of Drs. Giri Narasimhan and Miguel Alonso**

Project Steps

1. Select **Faculty Mentor, Industry/Specialist Mentor, Project Team** & **Evaluation Committee**
2. Select **Dataset** & Identify Broad **Questions**
3. Flesh out **Details** of the Project
4. Write a preliminary **Proposal** and make a **Presentation**
5. Meet regularly with mentors and **Execute** project
6. Discuss preliminary results and **Refine** project
7. Make final oral **Presentation** and submit final **Project Report**

Capstone Project (2 Semester) Plan

SEMESTER 1

- **Pick a problem area and mentor** — **May 21**
- **Pick a problem, data set, and formulate questions** — **Jun 4**
- **Download the data; plan tools; identify resources** — **Jun 11**
- **Present preliminary plan and submit project proposal** — **Jun 18**
- **Design algorithms, analyze, visualize & Interpret** — **Jun & Jul**
- **Present preliminary proposal & results** — **Jul 23**
- **Email progress report to course director on first and third Thu every month**

Capstone Project (2 Semester) Plan

SEMESTER 2

- **First class meeting**   **May 21**
- **Design algorithms, analyze, visualize & Interpret**   **May & Jun**
- **Present progress report**   **Jun 18**
- **Iterate, Improve, Refine**   **Jun & Jul**
- **Final presentations with Evaluation committee**   **Jul 23**
- **Final Report, Material, and website**   **Jul 27**

Capstone Project (1 Semester) Plan

- **Pick a problem area and mentor**   **May 21**
- **Pick a problem, data set, and formulate questions**   **Jun 4**
- **Download the data; plan tools; identify resources**   **Jun 11**
- **Present progress report**   **Jun 18**
- **Iterate, Improve, Refine**   **Jun 18 thru Jul 23**
- **Final presentations with Evaluation committee**   **Jul 23**
- **Final Report, Material, and website**   **Jul 27**

Evaluation (1ˢᵗ of 2-Semester Plan)

- **Project Proposal**   **35 %**
- **Project Progress Reports**   **15 %**
- **Proposal Presentation**   **50 %**

Evaluation (2nd of 2-Semester Plan)

- **Project Proposal**   **10** %
- **Proposal Presentation**   **5** %
- **Final Project Report**   **35** %
- **Final Project Presentation**   **15** %
- **Project Updates & Execution** **35** %

Evaluation (1-Semester Plan)

- **Project Proposal**   **10** %
- **Proposal Presentation**   **5** %
- **Final Project Report**   **35** %
- **Final Project Presentation**   **15** %
- **Project Updates & Execution**   **35** %

Class Meeting Dates over Zoom

- Class 1   **May 21**
- Class 2 (Progress report)   **June 18**
- Class 3 (Final Presentations)   **July 23**

(All meetings tentatively from 4-5 PM)