IDC 6940: Capstone in Data Science

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Giri NARASIMHAN

www.cs.fiu.edu/~giri/teach/CapDS-S20.html

Course Preliminaries

- **Course Webpage:**

http: //www.cs.fiu.edu/~giri/teach/CapDS-S20.html
  - Lecture Slides; Reading Material; Announcements;
  - VISIT OFTEN!
- **Class meets 6:25 – 7:40 PM, GL 137 third Thu every month**
- **First meeting will be on Thu, Jan 16**
- **Office ECS 254B; Office Hours: By Appointment Only**
- **Phone: x-3748; 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 once every month.
- 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 a faculty mentor 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 Plan: Semester 1

- Pick a problem area and mentor   Jan 16
- Pick a problem, data set, and formulate questions   Feb 20
- Download the data; plan tools; identify resources   Mar 5
- Submit Initial Proposal for Capstone   Mar 5
- Design algorithms, analyze, visualize & Interpret   Mar & Apr
- Present preliminary proposal & results   Apr 16
- **Email progress report to course director on first and third Thu every month**

Capstone Project (2 Semester) Plan

SEMESTER 2

- **Design algorithms, analyze, visualize & Interpret**   **All Jan**
- **Present progress report**   **Mar 19**
- **Iterate, Improve, Refine**   **All Mar/Apr**
- **Final presentations**   **Apr 16**
- **Final Report**   **Apr 17**
- **Email progress report to course director on first and third Thu every month**

Course Evaluation (1st Semester)

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

Course Evaluation (2nd Semester)

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