



IDC 6940:  
Capstone in  
Data Science

**GIRI NARASIMHAN, SCIS, FIU**

**MIGUEL ALONSO, SCIS, FIU**

# Course Preliminaries

- ▶ Course Webpage: <http://www.cs.fiu.edu/~giri/teach/CapDS-F19.html>
  - Reading Material; Announcements; Suggestions
  - VISIT OFTEN!
- ▶ No regular class meetings
- ▶ Office ECS 254-B; Office Hours: By Appointment Only
- ▶ Phone: x-3748; Email: [giri@cis.fiu.edu](mailto:giri@cis.fiu.edu)
- ▶ Variable credit course

<http://www.cs.fiu.edu/~giri/teach/CapDS-F19.html>

# Course Expectations

- ▶ 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 two weeks. Schedule will be announced in advance on the course website.
- ▶ Lectures will be used for:
  - ❑ Case histories and Visiting speakers
  - ❑ Monitoring progress in project and troubleshooting
  - ❑ Class presentations

# Project Plan

- ▶ **Individual or team effort.**
  - ❑ Team Size? **2-3**
- ▶ **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 will be evaluated by a 3-person committee**

# Project Steps

1. Select **Faculty Mentor, Industry/Specialist Mentor & Project Team**
2. Select **Dataset** & Identify Broad **Questions**
3. Flesh out more **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, data set, and formulate questions Sep 11
- ▶ Download the data; plan tools; identify resources Sep 18
- ▶ Submit Initial Proposal for Capstone Sep 18
- ▶ Design algorithms, analyze, visualize & Interpret Oct & Nov
- ▶ Present preliminary proposal & results Dec 2-5
- ▶ **Biweekly email progress report to course director**

# Capstone Project (2 Semester) Plan

## SEMESTER 2

- ▶ Design algorithms, analyze, visualize & Interpret All September
- ▶ Present progress report Oct 7
- ▶ Iterate, Improve, Refine All November
- ▶ Final Report Nov 30
- ▶ Final presentations Dec 2-5
- ▶ **Biweekly email progress report to course director**

# Capstone Project (1 Semester) Plan

- ▶ Pick a problem, data set, and formulate questions Sep 11
- ▶ Download the data; plan tools; identify resources Sep 18
- ▶ Submit Initial Proposal for Capstone Sep 18
- ▶ Design algorithms, analyze, visualize & Interpret October
- ▶ Present preliminary proposal & results Oct 7
- ▶ Iterate, Improve, Refine All November
- ▶ Final Report Nov 30
- ▶ Final presentations Dec 2-5
- ▶ **Biweekly email progress report to course director**



# Course Evaluation

- ▶ **Project Proposal** **20 %**
- ▶ **Proposal Presentation** **5 %**
- ▶ **Final Project Report** **30 %**
- ▶ **Final Project Presentation** **15 %**
- ▶ **Project Execution & Results** **30 %**