



## INF 110 Discovering Informatics

# What is Informatics?



Slides courtesy of  
Dr. James Palmer

# 1. What is **informatics**?

- What do you think is the overall purpose of this course?
- What do you think are some of the top two-or-three more specific goals of the course?
- What do you hope to get out  of the course the most (it is ok to say that you “just want the credit!”)?
- How do you think this will help you in your future coursework or career?
- What are some of the things you hope to learn about or be able to do after this course?

## 2. What is **informatics**?

What are some things in your background or that you have seen or heard that have helped shape your impressions of informatics?

# Syllabus Review

- General Information
- Learning Outcomes
- Course Policies

Check BBLearn (<https://bblearn.nau.edu>) often!

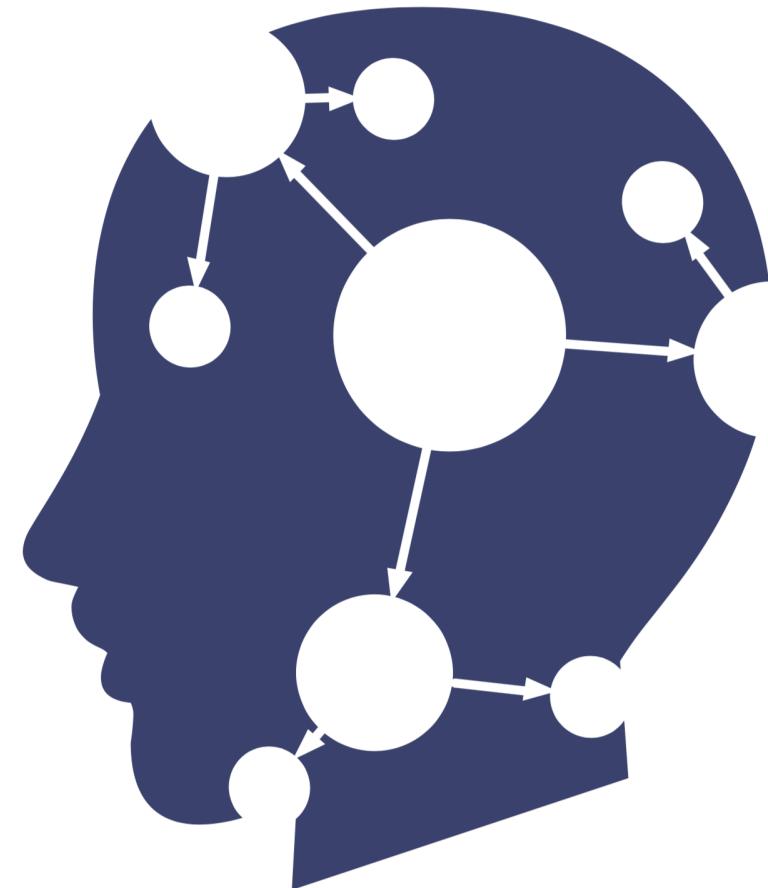
Marc Tollis  
SICCS (Bldg. 90) Room 117  
Office Hours: T, Th 2:30-4PM (in person or Zoom)  
• <https://nau.zoom.us/j/84898643271>  
• Meeting ID: 848 9864 3271  
• Password: 810269

# Required Text

Inferential Thinking **free** at:

<https://www.inferentialthinking.com>

Additional reading, videos, notes, slides  
homework, and quizzes are posted on  
BBLearn.



# Required Software

Language? Python

Environment? Jupyter Notebook

Distribution? Anaconda



<https://www.anaconda.com/download/>

Note: Anaconda works on Windows, Mac OS X, and Linux.

Warning: It's a **large** download!

# My Teaching Philosophy

**SEE IT**

- Lecture
- Discussion
- Think Aloud Coding
- Demonstrations

**DO IT**

- Worksheets
- Quizzes
- Projects
- Self-Practice 

**TEACH IT**

- Team/Pair Based Projects
- Student Presentations

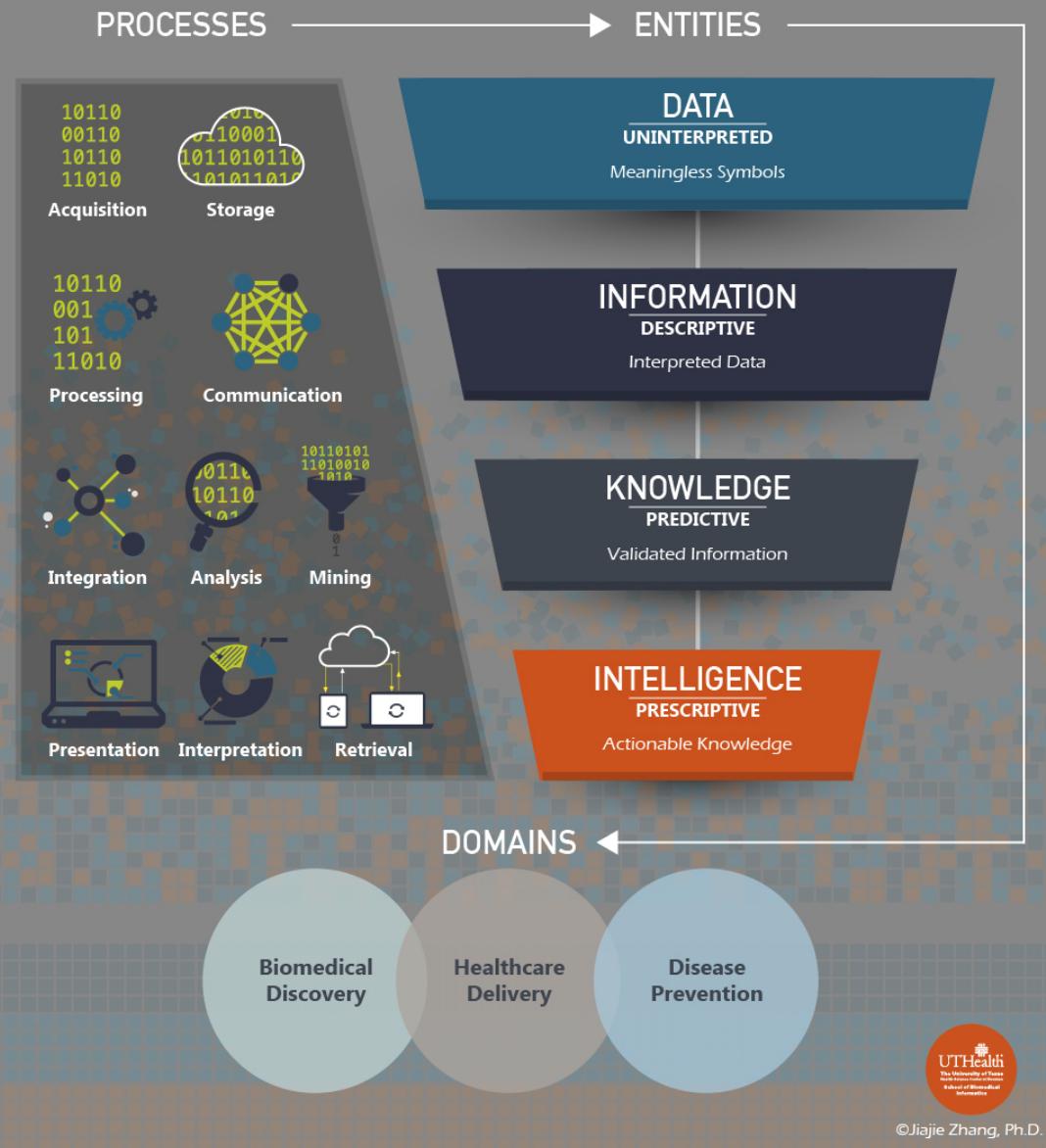
**(REPEAT)**

# My (computational) Problem Solving Process

- 1. Understand the Problem:** Identify constraints, enumerate requirements, and ask analytical questions
- 2. Plan a Solution:** Choose general problem solving heuristics and then use a variety of design and modeling tools to describe potential solutions to the problem
- 3. Implement and Test:** Transform informal plans into formal testable software and hardware
- 4. Reflection:** Reflect on our solution in such a way that we can improve our approach to solving this or other problems

(repeat)

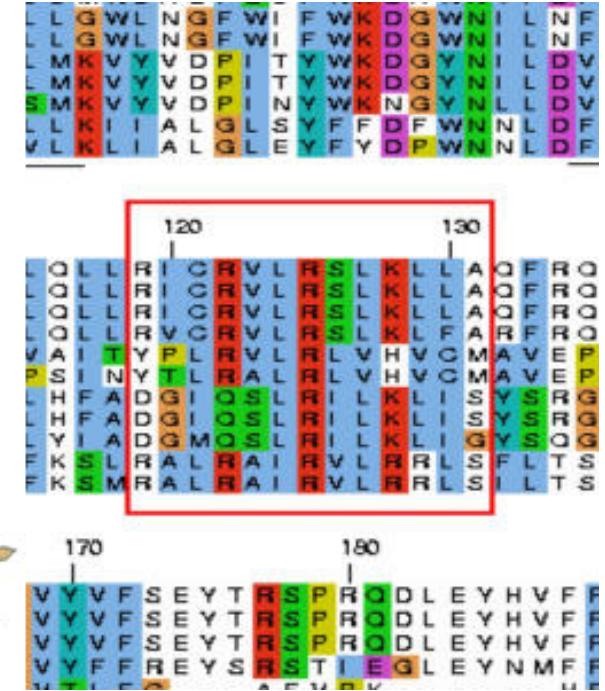
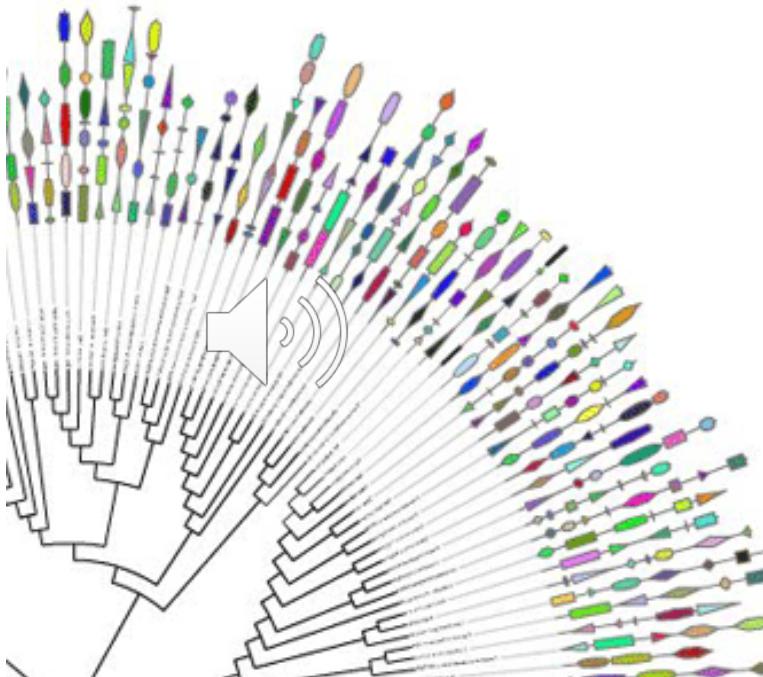
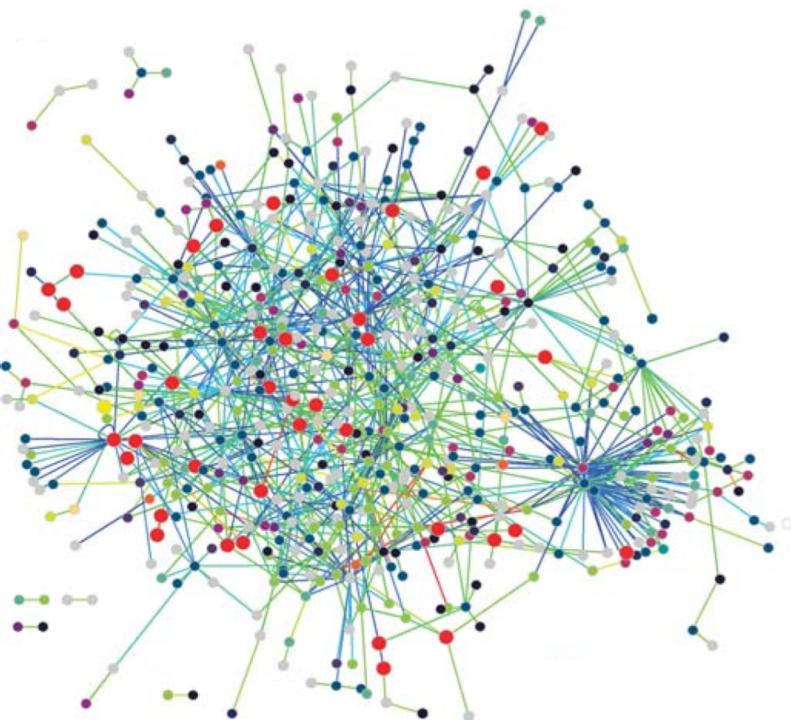
## INFORMATICS = DATA SCIENCE



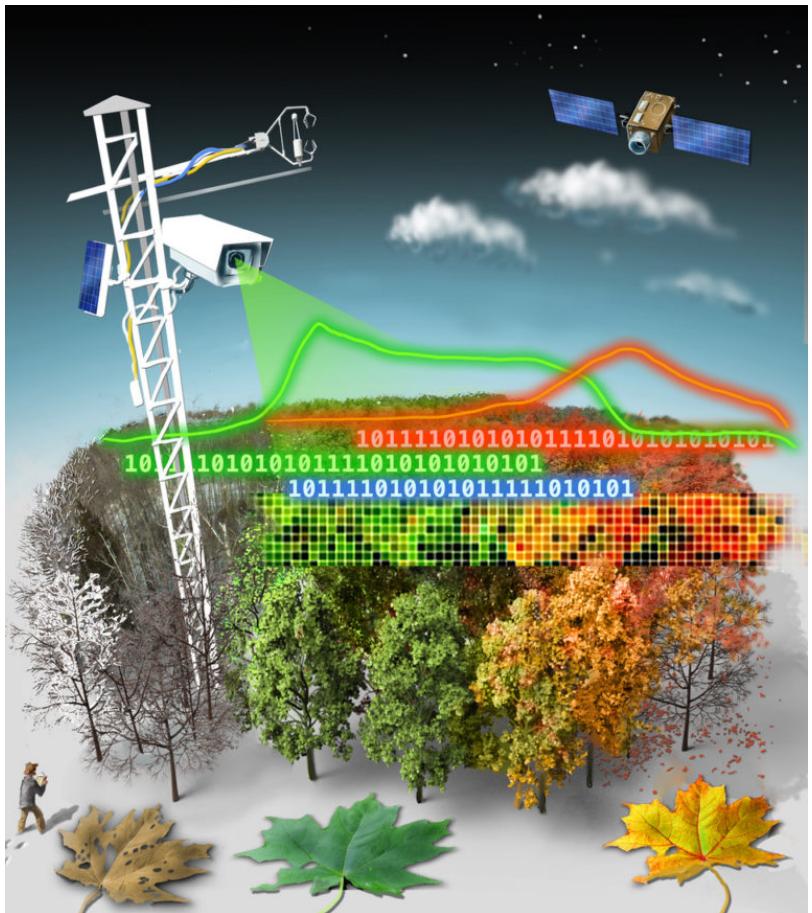
# Informatics in One Slide

Informatics is about the acquisition, storage, transformation, integration, analysis, and interpretation of data in order to solve problems

# Bioinformatics

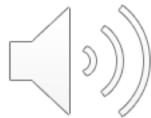


# Ecoinformatics



# ..and more

- Healthcare informatics
- Business informatics
- Materials informatics
- Music informatics
- Neuro informatics
- Engineering informatics



# Live Code Pride and Prejudice

Task: Analyze the characters in Pride and Prejudice

## Learning Outcomes

- Open a Jupyter Notebook
- Modify existing Python Code
- Running code in a Jupyter Notebook
- Adding cells to a Jupyter Notebook
- Exposure to a “scientific workflow”



**end**