

## IST652 – Scripting for Data Analysis

### Required Readings and Assignments

Week/Lecture	Topic	Required Reading and Assignment
1	Data Pipeline and Python Language Basics	<b>Required Readings</b> Python for Everybody, Chapters 1, 2, 3, 5, and 8. <a href="#">Data Science: A Kaggle Walk-through: Introduction.</a>
2	Booleans and Dictionaries	<b>Required Readings</b> Python for Everybody, Chapters 6 and 7. <a href="#">Data Exploration: A Kaggle Walk-through Understanding the data.</a>
3	Exploring and Transforming Data for Structured Data	<b>Required Readings</b> Python for Everybody, Chapters 3, 4, and 9. <b>Assignment</b> Lab 1* <b>Quiz 1 will open</b>
4	Arrays, Functions, and Categorical Summarization	<b>Required Readings</b> Python for Everybody, Chapter 4. <a href="#">Cleaning the Data: A Kaggle Walk-through.</a> <a href="#">Python NumPy Tutorial</a> (Scroll down in the tutorial to see the part for NumPy.) <b>Assignment</b> Lab 2*
5	Stacking and Unstacking Data	<b>Required Readings</b> <a href="#">Wide and Narrow Data</a> <a href="#">The Wide and Long Data Format for</a>

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		<a href="#">Repeated Measures Data</a>  <a href="#">Data Science: A Kaggle Walkthrough – Transforming the Data</a>  <b>Assignment</b> Homework 1*

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6	Semi-structured Data	<b>Required Readings</b> <a href="#">MDN Web Docs: HTML</a> <a href="#">W3Schools HTML Element Reference</a> <a href="#">Dominos: Data-Driven Decision Making at the World's Largest Pizza Delivery Chain</a> <b>Assignment</b> Project Proposal*
7	Mongo Database, JSON From RSS	<b>Required Readings</b> <a href="#">NoSQL Databases: An Overview</a> <a href="#">Pymongo—API Documentation</a> <a href="#">PyMongo Tutorial</a> <a href="#">JSON Encoder and Decoder</a> <a href="#">XML vs. JSON.</a> <b>Assignment</b> Lab 3* <b>Quiz 2 will open</b>
8	Processing Twitter and Facebook	<b>Required Readings</b> <a href="#">Twitter Developer Documentation</a> <a href="#">Tweepy Python Tutorial</a> <a href="#">Tweepy Search API</a> <a href="#">Mining Twitter Data With Python (Part 1: Collecting Data)</a> <a href="#">Data Science: A Kaggle Walkthrough - Adding New Data</a> <b>Assignment</b>

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		Homework 2*
9	Unstructured Data	<b>Required Readings</b> <a href="#">Regular Expression Documentation</a> <a href="#">Data Science: A Kaggle Walkthrough – Creating a Model</a>
10	Network Structures	<b>Required Readings</b> <a href="#">8 Ways to Help Your Tweets Go Viral</a> <a href="#">Python NetworkX Package Tutorial</a> <b>Assignment</b> Final Project Report* Final Project Presentations
11	Presentations	Final Project Presentations