Data Analyst Nanodegree: General Timeline \*July cohort and beyond\* Updated 7/2/15



## **Program Timeline**

Your **Nanodegree program** is an *epic adventure*. Each week, you'll learn and apply new skills, and share successes and challenges with your <u>learning community</u>. Whatever your pace or daily schedule along the way, use the checklist below as a tool to make sure you stay on track with your cohort and cross the finish line to graduation. We can't wait to see where your adventure takes you!

\*Aside from the first week, all dates listed are Mondays. Tasks listed should be completed before the following Monday. Links will take you right to the classroom to tackle the tasks! Submission deadlines are indicated in orange and work should always be submitted by Monday of the following week.

Click <u>here</u> to download this timeline, and <u>here</u> to see how to mark tasks as completed.

Week	What to work on	
Week 0	<ul> <li>☐ Enroll!</li> <li>☐ Watch the welcome video</li> <li>☐ Complete the Readiness Assessment</li> </ul>	
Project 0: Find the Optimal Chopstick Length Learn the skills in <u>Lesson 1 of Statistics</u>		
Week 1 8/30	<ul> <li>Go through your Nanodegree Orientation</li> <li>☐ If needed, review Lesson 1</li> <li>☐ Complete and submit Project 0: Find the Optimal Chopstick Length for feedback on your progress so far!</li> </ul>	
	Project 1: Test a Perceptual Phenomenon  Learn the skills in <u>Statistics</u>	
Week 2 9/6	<ul> <li>Use the <u>Statistics Placement Advisor</u> to determine how much of the Statistics course you will need.</li> <li>☐ If needed, review <u>Lesson 2</u> and <u>Lesson 3</u></li> </ul>	
Week 3	☐ If needed, review <u>Lesson 4</u> and <u>Lesson 5</u>	
Week 4	☐ If needed, review <u>Lesson 6</u> and <u>Lesson 7</u>	
Week 5	☐ If needed, review <u>Lesson 8</u> and <u>Lesson 9</u>	
Week 6	☐ If needed, review <u>Lesson 10a</u> , <u>Lesson 10b</u> , and <u>Lesson 11</u>	



Week 7	□ Complete and submit Project 1: Test a Perceptual Phenomenon	
Project 2: Analyzing the NYC Subway Dataset  Learn the skills in <u>Intro to Data Science</u>		
Week 8	<ul> <li>☐ Complete Lesson 1: Introduction</li> <li>☐ Complete Problem Set 1: Titanic Survivor Data</li> <li>☐ Get more familiar with Numpy and Pandas by exploring their documentation</li> </ul>	
Week 9	<ul> <li>☐ Complete Lesson 2: Data Wrangling</li> <li>☐ Complete Problem Set 2: Wrangling Subway Data</li> <li>☐ Continue exploring Numpy and Pandas</li> </ul>	
Week 10	<ul> <li>Complete <u>Lesson 3: Data Analysis</u></li> <li>Complete <u>Problem Set 3: Analyzing Subway Data</u></li> <li>Review the extra materials on the Mann-Whitney U-Test, Linear Regression and Gradient Descent, available in the Downloadables section of any video in <u>Lesson 3</u></li> </ul>	
Week 11	<ul> <li>Complete <u>Lesson 4: Data Visualization</u></li> <li>Complete <u>Problem Set 4: Visualizing Subway Data</u></li> <li>Make a variety of different visualizations of the subway data on your own computer</li> </ul>	
Week 12	<ul> <li>Begin work on <u>Project 2</u></li> <li>Make sure you read <u>the rubric</u> closely</li> <li>Consider using <u>iPython Notebook</u> (which comes with <u>Anaconda</u>) to explore the dataset on your own computer</li> </ul>	
Week 13	<ul> <li>Continue work on <u>Project 2</u></li> <li>Submit Project 2: <u>Analyzing the NYC Subway Dataset</u></li> </ul>	
	Project 3: Data Wrangle OpenStreetMaps Data Learn the skills in <u>Data Wrangling with MongoDB</u>	
Week 14	<ul> <li>□ Complete <u>Lesson 1: Data Extraction Fundamentals</u></li> <li>□ Complete the <u>Lesson 1 Problem Set</u></li> <li>□ Learn more about <u>File IO</u> and <u>reading and writing CSVs</u> in Python</li> </ul>	
Week 15	<ul> <li>□ Complete <u>Lesson 2: Data in More Complex Formats</u></li> <li>□ Complete the <u>Lesson 2 Problem Set</u></li> <li>□ Try using <u>BeautifulSoup</u> to parse a web page on your own computer</li> </ul>	
Week 16	<ul><li>□ Complete <u>Lesson 3: Data Quality</u></li><li>□ Complete the <u>Lesson 3 Problem Set</u></li></ul>	
Week 17	<ul> <li>□ Complete Lesson 4: Working with MongoDB</li> <li>□ Complete the Lesson 4 Problem Set</li> <li>□ Install MongoDB and try running some queries locally</li> </ul>	
Week 18	<ul> <li>Complete Lesson 5: Analyzing Data</li> <li>Complete the Lesson 5 Problem Set</li> <li>Starting preparing for Project 2 by reading the description and reviewing the rubric</li> </ul>	
Week 19	☐ Complete <u>Lesson 6: Case Study - Openstreetmap Data</u>	

	☐ Choose what area's OpenStreetMap data you will clean, and follow these instructions to download the data	
Week 20	☐ Continue work on <u>Project 3</u>	
Week 21	☐ Submit Project 3: <u>Data Wrangle OpenStreetMaps Data</u>	
Project 4: Explore and Summarize Data Learn the skills in <u>Data Analysis with R</u>		
Week 22	<ul> <li>□ Complete <u>Lesson 1: What is EDA?</u></li> <li>□ Complete <u>Lesson 2: R Basics</u></li> <li>□ Install <u>the R programming language</u> and <u>RStudio</u></li> <li>□ Download <u>the datasets</u> for the course</li> <li>□ Begin reviewing <u>R introductory tutorials</u></li> </ul>	
Week 23	<ul> <li>Complete <u>Lesson 3: Explore One Variable</u></li> <li>Complete <u>Problem Set 3</u>, where you will explore single variables from the diamonds dataset</li> <li>Continue reviewing R <u>examples</u> and <u>tutorials</u></li> </ul>	
Week 24	<ul> <li>Complete Lesson 4: Explore Two Variables</li> <li>Complete Problem Set 4, where you will explore pairs of variables in the diamonds dataset</li> <li>Starting preparing for Project 3 by reading the description and reviewing the rubric. You can also checkout the example project.</li> </ul>	
Week 25	<ul> <li>Complete <u>Lesson 5: Explore Many Variables</u></li> <li>Complete <u>Problem Set 5</u>, where you will further explore the diamonds dataset</li> </ul>	
Week 26	☐ Complete <u>Lesson 6: Diamonds &amp; Price Predictions</u>	
Week 27	<ul> <li>Choose and download a dataset for <u>Project 4</u></li> <li>Perform an initial exploration of your dataset, remembering to carefully document observations</li> </ul>	
Week 28	<ul> <li>□ Finish Project 4</li> <li>□ Create your RMD file and review your project report (the HTML file) before submission</li> </ul>	
Week 29	<ul> <li>Submit Project 4: Explore and Summarize Data</li> <li>Learn more about Improving Your Career and fill out more of your profile.</li> </ul>	
	Project 5: Identifying Fraud from Enron Email Learn the skills in <u>Intro to Machine Learning</u>	
Week 30	<ul> <li>Complete <u>Lesson 0: Welcome</u></li> <li>Complete <u>Lesson 1: Naive Bayes</u></li> <li>If you haven't yet, download <u>Anaconda</u>. This comes with <u>scikit-learn</u>, which you will need for the course.</li> </ul>	
Week 31	☐ Complete <u>Lesson 2: SVM</u>	
Week 32	<ul> <li>Complete <u>Lesson 3: Decision Trees</u></li> <li>Complete <u>Lesson 4: Choose Your Own Algorithm</u></li> </ul>	
Week 33	☐ Complete <u>Lesson 5: Datasets and Questions</u>	

Week 34	<ul><li>Complete <u>Lesson 6: Regressions</u></li><li>Complete <u>Lesson 7: Outliers</u></li></ul>	
Week 35	<ul> <li>Complete <u>Lesson 8: Clustering</u></li> <li>Complete <u>Lesson 9: Feature Scaling</u></li> </ul>	
Week 36	<ul> <li>Complete Lesson 10: Text Learning</li> <li>Complete Lesson 11: Feature Selection</li> <li>Starting preparing for Project 4 by reading the description and reviewing the rubric- make sure you review the guiding questions!</li> </ul>	
Week 37	<ul><li>□ Complete <u>Lesson 12: PCA</u></li><li>□ Complete <u>Lesson 13: Validation</u></li></ul>	
Week 38	<ul><li>Complete <u>Lesson 14: Evaluation Metrics</u></li><li>Complete <u>Lesson 15: Tying It All Together</u></li></ul>	
Week 39	☐ Begin working on <u>Project 5</u>	
Week 40	<ul> <li>Continue working on <u>Project 5</u></li> <li>Remember to document all your observations! They will be very helpful for the final project report</li> </ul>	
Week 41	☐ Submit Project 5: Identifying Fraud from Enron Email	
Project 6: Tell Stories with with Data Visualization  Learn the skills in Data Visualization and D3.js		
Week 42	<ul> <li>Complete <u>Lesson 1a: Visualization Fundamentals</u></li> <li>Download <u>D3.js</u> and <u>dimple.js</u></li> </ul>	
Week 43	If you are unfamiliar with HTML or CSS, or need a refresher, go through Intro to HTML and CSS	
Week 44	☐ If you are unfamiliar with JavaScript, or need a refresher, go through <u>JavaScript Basics</u>	
Week 45	<ul> <li>□ Complete <u>Lesson 1b: D3 Building Blocks</u></li> <li>□ Complete <u>Problem Set 1</u>, including <u>Mini-Project 1</u></li> </ul>	
Week 46	☐ Complete <u>Lesson 2a: Design Principles</u>	
Week 47	<ul><li>Complete <u>Lesson 2b: Dimple.js</u></li><li>Complete <u>Problem Set 2</u>, including <u>Mini-Project 2</u></li></ul>	
Week 48	☐ Complete <u>Lesson 3: Narrative Structures</u>	
Week 49	☐ Begin work on <u>Lesson 4: Animation and Interaction</u>	
Week 50	☐ Complete <u>Lesson 4</u>	
Week 51	☐ Review the Project 6 <u>description</u> and <u>rubric</u> and begin work on <u>Project 5</u>	
Week 52	<ul> <li>Iterate on <u>Project 6</u></li> <li>Share your visualization with your friends and family, and update it based on their feedback</li> </ul>	
Week 53	☐ Submit Project 6: Make Effective Data Visualization	
Project 7: Design and Analyze an A/B Test Learn the skills in <u>A/B Testing</u>		

Week 54	☐ Complete <u>Lesson 1</u> and <u>Lesson 2</u>
Week 55	☐ Complete <u>Lesson 3</u>
Week 56	☐ Complete <u>Lesson 4</u>
Week 57	<ul> <li>Complete <u>Lesson 5</u></li> <li>Review the Project 7 <u>instructions</u>, <u>submission template</u>, and <u>rubric</u> and begin work on <u>Project 7</u></li> </ul>
Week 58	<ul> <li>□ Submit Project 7: Design and Analyze an A/B Test</li> <li>□ Complete the Final Steps to verify your project submissions and schedule your exit interview!</li> </ul>