HoyAlytics Spring 2023 - Analyst Training

Course Description
The HoyAlytics Analyst Training Program spans eleven weeks and focuses on developing practical, technical skills. Each of the four modules uses real-world applications of data to solve problems, giving Analysts the skills to use in the Consulting or Analytics divisions.

Course Objectives
1. Gain a overarching understanding of the basic tools used in data analytics
2. Learn how to clean, process, and visualize data
3. Present descriptive, predictive, and prescriptive analysis to future clients

Prerequisites
None

Materials Needed
Laptop

Software
Google Colab (Python), Tableau Desktop, Slack, Google Classroom

Evaluation Method
You will collaborate with your peers during class to solve real-world problems. Instructors will provide feedback on your weekly practice problems, exams, and final project.

Google Classroom
Google Classroom will be the hub of the training program. The code to join is **b2u3aut** or click here to join. All class materials (Colabs, slides) will be linked to the corresponding day's classwork with a personal copy already attached for you. Due dates will be clearly outlined for collectable work and submissions will be to Google Classroom posts.

Asynchronous Practice Problems
Asynchronous practice problems will replace the time typically reserved for a third class session. These problems are meant to be a collaborative way to practice the week's topics and are evaluated on a fair attempt basis. The more you put into these problems, the more you'll get out. By the next class, please turn these problems in via Google Classroom.

Absences
You are permitted one unexcused absence for a lecture this semester. For excused absences, please notify Shray and/or the instructor ahead of the class time that you will not be in attendance. If you miss class, please reach out to Shray or the instructor, and we will provide you with completed lecture notes.

Instructors
Chief Training Officer: Shray Dewan
Vice President of Training: Allison Kim
Vice President of Training: Jason Yi
Vice President of Training: Matthew Jordan

Vice President of Training: Veronica Xu

Class Time
Varies by week – See schedule below or Google Calendar for dates/times and locations

Week	Day	Date	Time	Room	Topics	Instructor(s)
Introduction to Python						
1	Tue	1/31	8-9pm	MSB 450	Introduction to Training	Everyone
	Thu	2/2	7-8pm	MSB 130	Syntax and Structures, Functions	Matthew Jordan
	Asynchronous				Practice Problems	Matthew Jordan
2	Tue	2/7	8-9pm	MSB 450	If Statements, While Loops, For Loops, Lists	Matthew Jordan
	Thu	2/9	7-8pm	MSB 130	Practice Problems	Matthew Jordan
	Sat	2/11	1-2pm	MSB 140	Intro to Python Check-In	Matthew Jordan
Intermediate Python Topics						
3	Tue	2/14	8-9pm	MSB 450	numpy, Arrays	Matthew Jordan
	Thu	2/16	7-8pm	MSB 130	matplotlib	Matthew Jordan
	Asynchronous				Practice Problems	Matthew Jordan
4	Tue	2/21	8-9pm	MSB 450	Pandas (Importing, Missing Values)	Matthew Jordan
	Thu	2/23	7-8pm	MSB 130	Pandas (Concatenating, Merging, Selecting, Exporting)	Matthew Jordan
	Asynchronous				Practice Problems	Matthew Jordan
Project-Based Applications						
5	Mon	2/27	8-9pm	MSB 440	Solo Project: Python-Based Applications	Allison Kim
	Tue	2/28	8-9pm	MSB 450		Allison Kim
	No Assigned Material - Spring Break					Allison Kim
6	Mon	3/13	8-9pm	MSB 440	Solo Project: Python-Based Applications	Shray Dewan
	Tue	3/14	8-9pm	MSB 450		Allison Kim
	Asynchronous				Path Decision	Allison Kim
Path A: Consulting - Tableau, Business Topics						
7	Mon	3/20	8-9pm	MSB 440	Sheets	Veronica Xu
	Tue	3/21	8-9pm	MSB 440		Veronica Xu
	Asynchronous				Sheets: Practice	Veronica Xu

8	Mon	3/27	8-9pm	MSB 130	Dashboards	Veronica Xu
	Tue	3/28	8-9pm	MSB 440		Veronica Xu
	Asynchronous				Dashboards: Practice	Veronica Xu
9	Mon	4/3	8-9pm	MSB 130	Presentation Basics	Veronica Xu
	Tue	4/4	8-9pm	MSB 440		Veronica Xu
	Asynchronous				Business Analysis	Veronica Xu
10	Mon	4/17	8-9pm	MSB 130	Presentation Work Time	Veronica Xu
	Tue	4/18	8-9pm	MSB 440		Veronica Xu
	Asynchronous					Veronica Xu
11	Mon	4/24	8-9pm	MSB 130	Final Presentations	Veronica Xu
	Tue	4/25	8-9pm	MSB 440		Veronica Xu
	Asynchronous				Post-Training Survey	Veronica Xu
Path B: Analytics - Advanced Python						
7	Mon	3/20	7-8pm	MSB 130	Introduction to Machine Learning + Coding Strategies	Jason Yi
	Wed	3/22	7-8pm	MSB 450	Unsupervised Learning: Clustering	Jason Yi
	Asynchronous				Practice Problems	Jason Yi
8	Mon	3/27	7-8pm	MSB 130	Unsupervised/Supervised Learning: Clustering/Classification	Jason Yi
	Wed	3/29	7-8pm	MSB 450	Supervised Learning: Classification	Jason Yi
	Asynchronous				Practice Problems	Jason Yi
9	Mon	4/3	7-8pm	MSB 130	Supervised Learning: Regression	Jason Yi
	Wed	4/12	7-8pm	MSB 450	Supervised Learning: Regression/Wrap Up	Jason Yi
	Asynchronous				Practice Problems	Jason Yi
10	Mon	4/17	7-8pm	MSB 130	Presentation Work Time	Jason Yi
	Wed	4/19	7-8pm	MSB 450		Jason Yi
	Asynchronous					Jason Yi
11	Mon	4/24	7-8pm	MSB 130	Final Presentations	Jason Yi
	Wed	4/26	7-8pm	MSB 450		Jason Yi
	Asynchronous				Post-Training Survey	Jason Yi