



PARTICIPANT BROCHURE

OCTOBER 2020 - FEBRUARY 2021



DS4A / EMPOWERMENT DATA SCIENCE FOR ALL

WELCOME & PROGRAM BACKGROUND

Welcome to the 2020 Data Science for All (DS4A) / Empowerment, developed by Correlation One. We are thrilled for you to apply to this unique program for business-focused data science learning and career development.

The DS4A program features the premier data analytics and AI training in the world. Lead Instructor Natesh Pillai of Harvard University, in combination with a Teaching Assistant team from top institutions like Stanford and MIT, will work with you to explore data science in ways unlike any other program. Our training is hyper-practical, based on business cases and real-world commercial contexts.

In addition to training, DS4A supercharges your career by matching you with actual companies and job opportunities, as well as mentors. Throughout the program, you will work side by side with data-driven professionals from our nation's leading companies in multiple fields.

We look forward to working with you over the 13 weeks of the program, as we master data analysis and the ways it is revolutionizing the future of work. Through lectures, interactive cases, and immersive group projects, you will learn what is possible from skills like querying big data, robust linear modeling, and data visualization.

This brochure serves as an overview of the program – how it is designed and what it offers you. Are you ready to access the data-driven jobs of tomorrow?



DS4A / EMPOWERMENT PARTICIPATION BROCHURE

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CORRELATION ONE / DATA SCIENCE FOR ALL

OUR MISSION

We believe that data & AI are rapidly changing jobs in every industry. The amount of data the world produces is growing exponentially. To get ahead in the data economy, students and working professionals must learn key data skills -- how to interpret results, how to tell a data-driven story, how to use data to make optimal business decisions.

Accessing the jobs of tomorrow requires data fluency.

Correlation One is the market leader providing data & analytics training globally. We believe that the biggest unsolved problem in AI is people. We are solving the people side of the AI equation through training and platforms to connect talent with jobs. We count the leading companies in the world as clients.

One big problem we noticed is that the data & AI revolution is disproportionately leaving behind under-represented groups and minorities. Access to the jobs of tomorrow is not equal.

DS4A / Empowerment seeks to remedy this. Our aim is to create a nationwide ecosystem of talented black, hispanic, LGBTQ+, and other under-represented minorities who are data fluent. Our vision is to provide free data analytics training to 10,000 people in the next three years and provide equal access to the jobs of tomorrow.





WHO SHOULD TAKE THIS COURSE?

This program is for students and for working professionals. Our curriculum accommodates both beginner and advanced skill levels. College degree (or current enrollment in college) is preferred; applicants should have graduated college within the last 10 years.

We welcome applicants from multiple fields – sales, marketing, finance, product, engineering, etc. Ideal applicants will have taken courses in STEM related fields. Some prior programming familiarity is preferred, but not required.

This program takes [high-potential talent](#) that is willing to work hard. We aim to make you the best data-driven professionals in your fields.

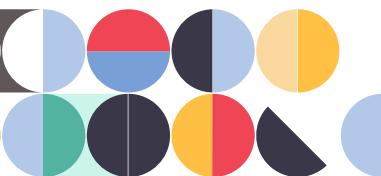
You do not need to quit your job or coursework to enroll in this program. Classes are held on [Saturdays](#) so that working professionals and students can partake while maintaining their current schedules.

The program is meant for those who are looking to become better at their existing jobs, as well as those looking to move into new jobs. The program offers both [training and career advancement](#).

Training will improve your data science skills: you will learn to work faster and smarter, connect models to commercial applications, and [execute full-life-cycle data science work](#) in applied contexts.

The program will also help you with career advancement by finding you new opportunities or helping you expand your current role with new capabilities. We will also pair you with [mentors](#) who will help guide your professional development.

Our graduates go on to be leading finance professionals, marketers, sales people, founders, and executives with deep data literacy.



OUR ADMISSIONS PROCESS

Entry into the program is competitive and merit-based. The program is open to both junior talent with potential, and senior talent with experience.

Candidates must be part of an underrepresented group.

Since teamwork and networking are critical to the DS4A experience, you will learn from other similarly talented participants during the program.

DS4A programs feature less than 10% applicant acceptance rates, so you know you are being placed among the nation's elite data talent.



The Online Application is open July 13 - September 25, 2020. The application form will ask for professional information, including a CV/resume.

[The application form can be found here](#)



This is a ~1 hour online exam designed to test your data-driven reasoning skills. Candidates who complete step one receive a personalized link to take the online Skills Assessment. This assessment should be completed as soon as possible to maximize chances of entry, as admissions are on a rolling basis.



Candidates who pass the Online Skills Assessment are invited to an interview. During the interview, we look for evidence of commitment, work ethic, and how you plan to use your learning and social capital from the program.

THERE ARE THREE KEY ELEMENTS THAT WE EVALUATE IN YOUR APPLICATION:

DEMONSTRATED PAST SUCCESSES:

We look for candidates with demonstrated records of success, however that success is defined

DATA-DRIVEN THINKING POTENTIAL:

We heavily weight our online Skills Assessment in evaluating your potential to think in a data-driven manner, prioritizing top Assessment performers

LEADERSHIP ABILITY & PROMISE:

We seek candidates who are strong leaders & learners. We look for those who will get the most out by putting the most in, and who will be stewards of the DS4A community

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CLASS CALENDAR

Class runs from 10am - 8pm ET on Saturdays (excluding holidays), to accommodate the schedules of professionals who have full-time jobs and who want to learn while continuing their jobs. Class dates are shown in the calendar below.

Classes are held virtually, and participants will come from across the country. Outside of class, participants will be required to spend about 6 hours per week on project work and homework. Participants will have real-time access to dedicated Teaching Assistants the Lead Instructor and other participants.

OCTOBER 2020

S	M	T	W	T	F	S
					1	2
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24 W1
25	26	27	28	29	30	31 W2

NOVEMBER 2020

S	M	T	W	T	F	S
1	2	3	4	5	6	7 W3
8	9	10	11	12	13	14 W4
15	16	17	18	19	20	21 W5
22	23	24	25	26	27	28
29	30					

DECEMBER 2020

S	M	T	W	T	F	S
			1	2	3	4
6	7	8	9	10	11	12 W7
13	14	15	16	17	18	19 W8
20	21	22	23	24	25	26
27	28	29	30	31		

JANUARY 2021

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9 W9
10	11	12	13	14	15	16
17	18	19	20	21	22	23 W10
24	25	26	27	28	29	30 W11
31						

FEBRUARY 2021

S	M	T	W	T	F	S
			1	2	3	4
7	8	9	10	11	12	13 W13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						



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CURRICULUM

The DS4A / Empowerment curriculum was designed with input from leading companies to cover skill needs as AI changes jobs in every industry. Our curriculum will immerse you in the most critical topics in data analytics today. Our aim is to close the "skills gap" between what you know and what top employers want, allowing you to advance your career in any industry.

Our curriculum is entirely case-based. Each concept is taught in the context of an actual business case, using real-world data. In addition, our curriculum is current: it evolves regularly and features the most relevant content.

The curriculum provides exposure to full-stack data fluency. You work on each part of the data analytics & AI process, while also going deep into key areas via extended cases and project work. Your learning includes:

OCTOBER 2020

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24 W1
25	26	27	28	29	30	31 W2

WEEK 1-2

	EXAMPLE CASE	SKILLS
10.18.20 W1	ESSENTIALS FOR WORKING WITH DATA	Python and the Jupyter note book setup and introduction Python programming Introduction to online resources and how to best do self-directed research
10.24.20 W2	DATA SCIENCE, MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE AT A GLANCE; BASICS OF PYTHON	Data Science, Machine Learning, and Artificial Intelligence at a Glance Identifying Expansion Opportunities for Luxury Commercial Airline Flights Capabilities and limits of DS/ML/AI, appropriate use cases of DS/ML/AI Setting up Git and the Python environment, Python basics
BONUS MODULE: Terminal and Git/version control		

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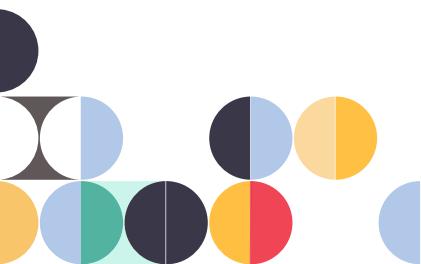
CURRICULUM NOVEMBER

NOVEMBER 2020

S	M	T	W	T	F	S	
1	2	3	4	5	6	7	W3
8	9	10	11	12	13	14	W4
15	16	17	18	19	20	21	W5
22	23	24	25	26	27	28	
29	30						

WEEK3-5

		EXAMPLE CASE	SKILLS
11.07.20 W3	DATA TRANSFORMATION; DATA INTERPRETATION (PART 1)	How are trading volume and volatility related for energy stocks? Should we develop a commercial SNAP test for predicting recovery from spinal cord injuries?	Data extraction (basic), data transformation (basic) Interpretation of charts, graphs, & table
BONUS MODULE: Simpson's paradox			
11.14.20 W4	DATA TRANSFORMATION; DATA INTERPRETATION (PART 2)	How do users engage with a mobile app for automobiles?	Interpretation of charts, graphs, & tables
BONUS MODULE: Dashboarding and Google Data Studio			
11.21.20 W5	VISUAL DASHBOARDING	How do top logistics companies use visual dashboarding today?	Presentation/selecting the right visualization



CURRICULUM DECEMBER

WEEK 6-8

DECEMBER 2020

S	M	T	W	T	F	S
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12	13	14	15	16	17	18
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12.05.20
W6

CODING DATA VISUALIZATIONS; ASKING THE RIGHT QUESTIONS (PART 1)

What patterns exist between energy consumption and generation?

Data transformation (basic), coding data visualizations

What factors are critical for mortgage applications?

Information gathering, Information sufficiency

OPTIONAL ADVANCED CASE

How do I automatically extract financial data for stocks?

Data extraction, web scraping

12.12.20
W7

ASKING THE RIGHT QUESTIONS (PART 2); EXPLORATORY DATA ANALYSIS

Spatial and Temporal Trends in Crop Production

Information gathering, Information sufficiency

What features determine the price of an Airbnb rental?

Precisely defining objectives & questions, data visualization

OPTIONAL ADVANCED CASE

How do we deploy public resources in Chicago to increase safety?

Hypothesis iteration, data visualization

PRE-WORK: AWS SETUP

12.19.20
W8

DATA WRANGLING & CLEANING

How do we prepare data for use with an analytics platform?

Data extraction (basic), web scraping (basic)

OPTIONAL ADVANCED CASE

How do I pre-process text data from Yelp reviews so I can analyze it

Data transformation, natural language processing

CURRICULUM JANUARY

WEEK 9-11

JANUARY 2021

S	M	T	W	T	F	S
				1	2	
3	4	5	6	7	8	9 W9
10	11	12	13	14	15	16
17	18	19	20	21	22	23 W10
24	25	26	27	28	29	30 W11
				31		

	EXAMPLE CASE	SKILLS
PRE-WORK: SQL SETUP		
01.09.21 W9	SQL IN A BIG DATA WORLD; STATISTICAL FOUNDATIONS OF DATA How can we optimize our sales of financial products? <small>OPTIONAL ADVANCED CASE</small> Analyzing Net Promoter Score (NPS) data with SQL	RDBMS (basic), Writing efficient SQL queries to extract data Writing efficient SQL queries to transform data
BONUS MODULE: SQL basics and practice		
01.23.21 W10	DATA-DRIVEN DECISION-MAKING PART 1 Does there exist significant differences between the balances of my various customers' cohorts? <small>OPTIONAL ADVANCED CASE</small> How do I develop an optimal strategy for sending a personal message for each of my customers?	Hypothesis testing, Statistical inference (basic) Statistical inference, Causal inference
OPTIONAL ADVANCED CASE Do prison reform programs reduce recidivism?		
01.30.21 W11	DATA-DRIVEN DECISION-MAKING PART 2 Do the types of crimes committed in Chicago depend on location and time? <small>OPTIONAL ADVANCED CASE</small> How can I experiment with online travel deals to attract more customers?	Hypothesis testing, Statistical inference (basic) A/B testing

**DATA-DRIVEN
DECISION-MAKING
PART 2**

OPTIONAL ADVANCED CASE
How should we price homes
in Seattle?

Residuals analysis,
variable transformations

OPTIONAL ADVANCED CASE
How important is the income
source of an online loan applicant?

Classification models

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CURRICULUM FEBRUARY

FEBRUARY 2021

S	M	T	W	T	F	S
			1	2	3	4
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
			28			

WEEK 12-13

2.06.21
W12

**SURVEYS & EXPERIMENTS;
LINEAR MODELING**

EXAMPLE CASE

SKILLS

How do I select survey participants
from a pool of potential customers
at my soon-to-be-opened sandwich
shop in order to plan the menu?

Segmentation & sampling,
designing experiments

What factors drive pay discrimination
between men and women
in your organization?

Implementing & interpreting linear
models

OPTIONAL ADVANCED CASE
How can I compare different models
that predict the probability of
defaulting on a loan?

Underfitting, overfitting &
cross-validation

OPTIONAL ADVANCED CASE
Case 9.2: How do I build a prediction
model for Lending Club loan defaults?

Classification models, model selection

2.13.21
W13

PROJECT PRESENTATIONS

Participants will present their Projects, with Awards Ceremony,
Commencement events, and Graduation to follow

PREMIER INSTRUCTORS

Our teaching team features the premier data science and AI instructors in the world. Our Lead Instructor is Correlation One's Chief Scientist, Professor Natesh Pillai.



Natesh Pillai is a tenured Professor in the Department of Statistics at Harvard University and a member of the Harvard Data Science Initiative.

He serves in the editorial boards of major scientific journals in the field including the Journal of the American Statistical Association, Journal of the Royal Statistical Society - Series B, and SIAM (Society for Industrial and Applied Mathematics) Journal on Mathematics of Data Science. He won the young researcher award in 2018 given by the International Indian Statistical Association for outstanding statistical research. Natesh received his Bachelor of Technology degree from the Indian Institute of Technology, Chennai and PHD in Statistics from Duke University.

Our team of Teaching Assistants hails from leading global institutions including Stanford University, the Massachusetts Institute of Technology, and Princeton University.

They include published authors of peer-reviewed technical and scientific papers, with thousands of hours of educational experience. Each participant will have a dedicated Teaching Assistant located full-time in your class who will serve as an educator and career advisor for the duration of the program.

Our teaching staff are not merely your educators, but your collaborators; they take personal pride in your work and are passionate about the potential for data, analytics, and AI to change your world!



EXTENDED CASES

Extended Cases serve as the “homework assignments” of the program. They are structured as complex, multi-part business problems, and participants must leverage all of the skills they have learned from that week’s lectures in order to solve them properly. For example, an Extended Case might require participants to identify factors driving a website’s negative reviews and propose solutions.

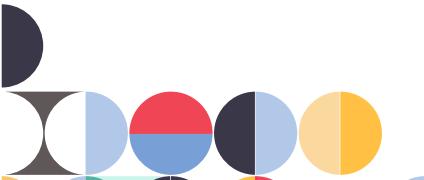
Participants work on Extended Cases individually (not as a team). Extended Cases are given out in the middle of the day on Fridays, and participants work on them throughout the following week. Extended Cases are then submitted by the beginning of class the following Friday. Each extended case is designed to take approximately 4 - 6 hours to complete. We encourage you to leverage other participants’ insights (through online forum) or TAs (through virtual office hours or direct communication) to solve issues related to these cases. During class, TAs will then review answers to the Extended Cases and critical concepts with you in person.

LEARNING IN TEAMS / PRACTICUM

When you begin the course, you will be placed in a Learning Team, which typically contains 4-6 participants. Participants are matched to a Team based on their skills, interests, and personal goals. We build teams that work well together, teach each other, and often become close friends. Throughout the course, and especially during the last 2 weeks, you will work with your Team on a data science Practicum. The Practicum is a full project that requires end-to-end problem scoping, infrastructure building, modeling, and ultimately presentation.

The Practicum will be based on a real-world AI challenge source from leading companies. These challenges may have a focus on marketing, sales, finance, or product. You will choose a project based on your interests and your desired career path. Through the Practicum, you will learn about an industry in-depth,

Practicums may also become valuable professional collateral, showcasing your ability to make an impact with data, from idea formulation to presentation. Practicums are the cornerstone of the class. It is the way participants advance their class learning to new depths, engage in deep teamwork, and solve real-world AI problems.



CAREER FAIR

Our program provides you the chance to meet leading companies, build your network, and land a top job. At our C1 Career Fair, you will present your work at DS4A to employers. Companies will get to know who you are – your skills, interests, and experience – and knowing you have been vetted and trained in the region's top data science program, will offer you quality roles. Our DS4A graduates have gone on to leading roles at Fortune 500 companies, major tech firms, and pioneering startups.

Companies who have hired from Correlation One programs in the past year: Amazon, SoftBank, Citadel, Lyft, Twitch, Point72, MarketAxess, Johnson & Johnson, Deloitte.



MENTORS

To further enhance your professional development, you will be paired with a Mentor who can offer support in one-on-one sessions. Mentor relationships allow you to gain the perspective of a more experienced professional who understands your needs and can offer thoughtful advice and direction, and help you make connections to further your unique professional goals.

Our mentors are diverse professionals from top firms and institutions around the world. They can provide not just tactical coaching but insight from personal experience to help you succeed.

SPEAKER SERIES

DS4A features a Speaker Series designed to expose our participants to cutting edge data science and how it is applied today. Speakers will include CEOs and CTOs of Fortune 500 companies and fast-growing startups as well as public sector and NGO leaders, like government ministers. Each speaker will discuss their perspective on how to use data science to change the world.

Our Speaker Series is not passive, either. You will get the chance to meet these speakers personally, ask them questions live, and talk to them at length during our Career Fair. Speakers know you are the best of the best in terms of data-driven professionals, and they are eager to meet you.





LIFELONG BENEFITS

Your DS4A experience is built to last longer than 13 weeks. DS4A graduates stay closely connected, and have gone on to co-found companies, create weekly meet-up groups, and offer each other jobs, among thousands of other post-class interactions. DS4A is not just about education, it's about a data ecosystem providing equal access to the jobs of tomorrow.



COST OF THE PROGRAM

Attending the DS4A / Empowerment program is completely free. Correlation One is bringing on corporate sponsors to finance the program so that cost is not an obstacle for the best talent applying.



AWARDS

At the end of the program, top-performing participants and top-performing teams will receive certain awards, which include both monetary prizes and recognition. Details of the awards will be shared with participants during class.



CERTIFICATION

Participants enrolled in the program will receive a "Certificate in Data Analytics" upon successful completion of the program. To receive certification as a Data Science For All / Empowerment graduate, participants must:

1. Attend at least 90% of lectures & activities
2. Complete at least 75% of Extended Cases with a 'Satisfactory' rating
3. Contribute sufficiently to the completion of Practicum Project, as confirmed by teammates and TA input.

Program graduates can highlight their certification to their existing employers or in interviews with potential employers, and also indicates membership in North America's most prestigious AI community.

DS4A PROPELS GRADUATES' CAREERS AND CHANGES LIVES.

DS4A TESTIMONIALS

DS4A graduates have experienced career advancement, found new job opportunities, started companies, built professional networks and made friends for life. We pride ourselves on your success, and testimonials from some of our graduates are below:

"The program instructs you in completely practical skills. Everything is very useful. DS4A has allowed me to take on new projects at my company, like building a dashboard visualization for business performance... I received a big promotion in less than one month!"

JULIA

"DS4A gave me the inspiration to make a major career change. I got an incredible job in healthcare through DS4A!"

JESSICA

"Learning from Natesh, a Harvard professor and one of the best data science teachers in the world, has been so inspiring! You can't find this level of teaching anywhere else."

KAREN

"DS4A changed my life! By the final week, I had already received three job offers, including one from my dream company, Ecopetrol!"

ADRIAN

"I love the DS4A community. To be part of a group of passionate and talented people is a tremendous resource. I started a company with two fellow participants and our entire class still keeps in touch, sharing job opportunities and ideas!"

CRISTIAN

correlation.one

DATA SCIENCE FOR ALL

The AI & data talent market is broken. The shift towards a data economy is rapidly transforming the roles of 200M+ analytical workers, and enterprises and governments lack the tools to manage this transformation.

Correlation One is the market leader in the data talent space. We enable companies to attract, assess and train analytical talent to build their data advantage. We have built an expert community of 200,000+ data scientists and 500+ relationships with the world's leading universities in the US, China, UK, Canada and Ireland.

Our global data science programs, including our signature Data-thons, have helped foster the AI talent ecosystem in multiple regions around the world. Our programs have also earned worldwide recognition, including a Harvard Business School case study.

We have developed custom talent solutions for some of the most sophisticated employers in the world, including SoftBank, Lyft, EY, Citadel, JP Morgan, Experian, Wayfair, Twitch, Two Sigma, Korn Ferry, University of Chicago, The Government of Colombia, Deloitte, and the National Science Foundation.

Correlation One is committed to promoting a more inclusive global AI ecosystem, including programs for more women and minorities in data science.

THANK YOU FOR YOUR SHARED INTEREST.

FOR MORE INFORMATION VISIT CORRELATION-ONE.COM

