Data Science Nigeria

Business Analytics for Professionals

Training objectives and class schedule

› Week 1:

  » Step-by-step mastery of Machine learning practice and key statistical concepts

› Week 2:

  » Deep dive into most popular frameworks – Linear/Logistic Regression in real world with general appreciation of other classification/prediction techniques

› Week 3:

  » Hands-on work-through on a real-life project with a view to understanding all the preliminary Data preparation, wrangling, exploration and key data architecture requirements

› Week 4:

  » Hands-on work-through on drag-and-drop tools with focus on MS Azure, Knime and BigML

› Week 5: Use cases on Business Analytics with practical insights sharing on Pricing, Knowledge representation and Churn management using social network analysis

› Post-session:

  » We want you to sustain the learning by progressing to acquire international certifications e.g ColumbiaX Data Science for Executive

Beyond this training – we want all attendees to progress unto global certification as an Executive Data Science practitioner from Columbia Business School – hence the curriculum has been aligned to these global standards
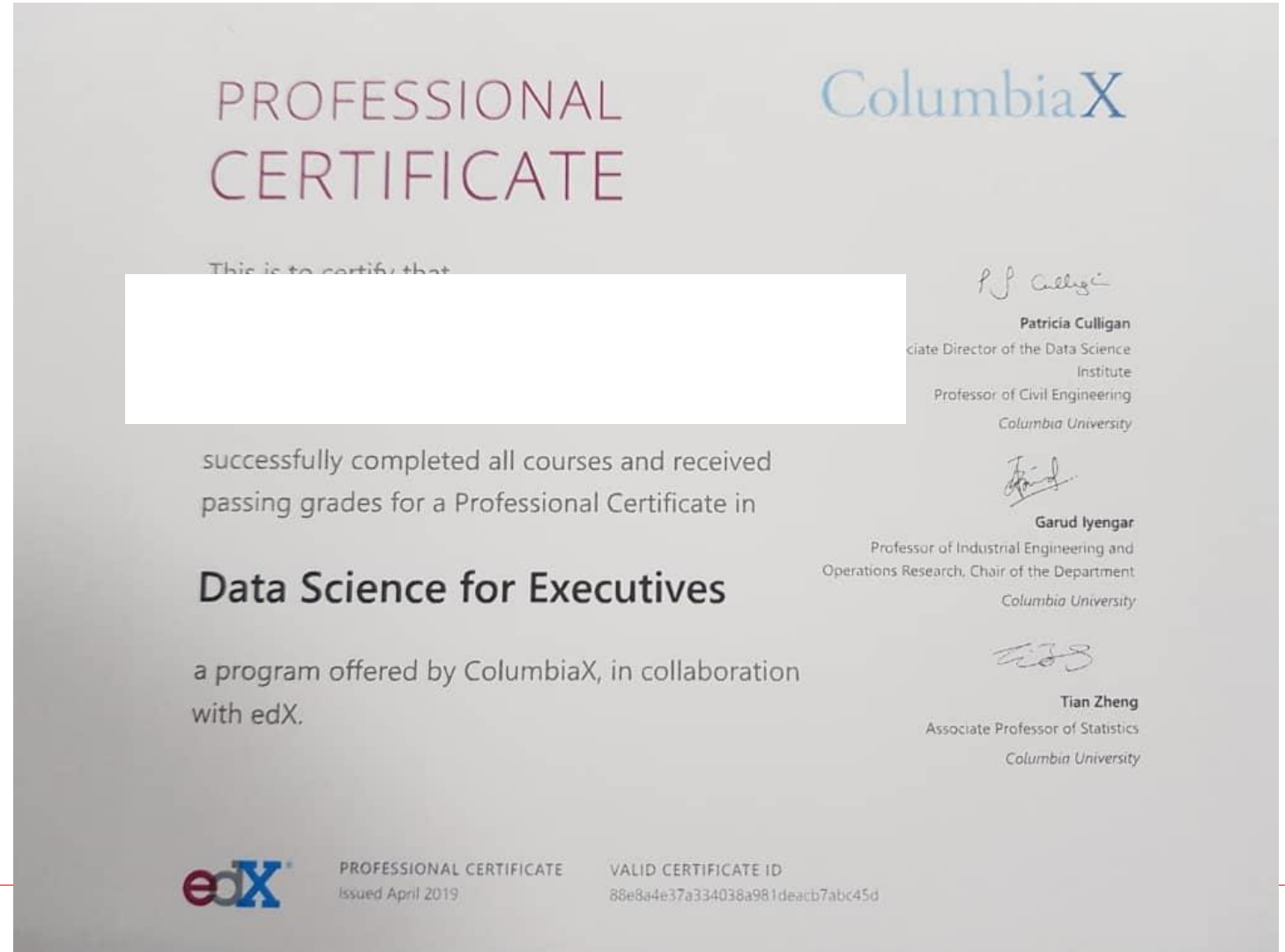
Professional Certificate in Data Science for Executives

ColumbiaX

Statistical Thinking for Data Science and Analytics ⌃

🕐 7–10 hours per week, for 5 weeks

Learn how statistics plays a central role in the data science approach.

[View the course](#)

Machine Learning for Data Science and Analytics ⌃

🕐 7–10 hours per week, for 5 weeks

Learn the principles of machine learning and the importance of algorithms.

[View the course](#)

Enabling Technologies for Data Science and Analytics: The Internet of Things ⌃

🕐 7–10 hours per week, for 5 weeks

Discover the relationship between Big Data and the Internet of Things (IoT).

[View the course](#)

Statistical Thinking for Data Science and Analytics

Introductory
7–10 hours per week, for 5 weeks
Free

- Data collection, analysis and inference

- Data classification to identify key traits and customers

- Conditional Probability-How to judge the probability of an event, based on certain conditions

- How to use Bayesian modeling and inference for forecasting and studying public opinion

- Basics of Linear Regression

- Data Visualization: How to create use data to create compelling graphics

Machine Learning for Data Science and Analytics

Introductory

7–10 hours per week, for 5 weeks

Free

- What machine learning is and how it is related to statistics and data analysis

- How machine learning uses computer algorithms to search for patterns in data

- How to use data patterns to make decisions and predictions with real-world examples from healthcare involving genomics and preterm birth

- How to uncover hidden themes in large collections of documents using topic modeling

- How to prepare data, deal with missing data and create custom data analysis solutions for different industries

- Basic and frequently used algorithmic techniques including sorting, searching, greedy algorithms and dynamic programming

# Enabling Technologies for Data Science and Analytics: The Internet of Things

Introductory
7–10 hours per week, for 5 weeks
Free

- Networks, protocols and basic software for the Internet of Things (IoT)

- How automated decision and control can be done with IoT technologies

- Discuss devices including sensors, low power processors, hubs/gateways and cloud computing platforms

- Learn about the relationship between data science and natural language and audio-visual content processing

- Study research projects drawn from scientific journals, online media, and novels

- Review fundamental techniques for visual feature extraction, content classification and high-dimensional indexing

- Techniques that can be applied to solve problems in web-scale image search engines, face recognition, copy detection, mobile product search, and security surveillance

- Examine data collection, processing and analysis

Competency Audit and skillset evaluation : pre and post
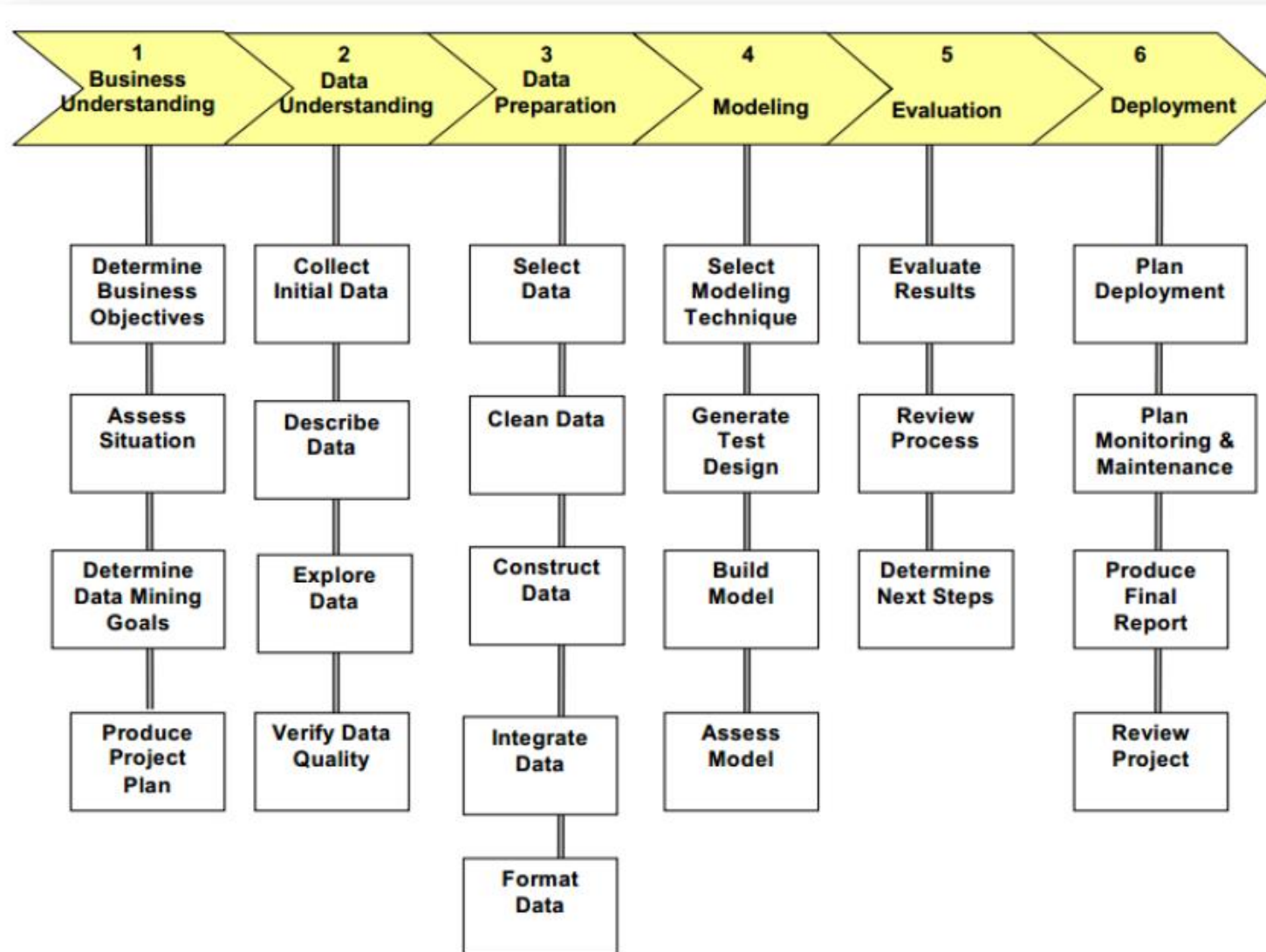
Rapridminer covers the entire life-cycle of prediction modeling, starting from data preparation to model building and finally validation and deployment. The GUI is based on a block-diagram approach, something very similar to Matlab Simulink. There are predefined blocks which act as plug and play devices. You just have to connect them in the right manner and a large variety of algorithms can be run without a single line of code.

DataRobot (DR) is a highly automated machine learning platform built by all time best Kagglers including Jeremy Achin, Thoman DeGodoy and Owen Zhang. Their platform claims to have obviated the need for data scientists.

BigML provides a selection of robustly-engineered Machine Learning algorithms proven to solve real world problems by applying a single, standardized framework across your company.

Cloud AutoML is a suite of machine learning products that enables developers with limited machine learning expertise to train high-quality models specific to their business needs. It relies on Google's state-of-the-art transfer learning and neural architecture search technology.

Paxata is one of the few organizations which focus on data cleaning and preparation, and not the machine learning or statistical modeling part. It is an MS Excel-like application that is easy to use.

Azure ML Studio is a simple yet powerful browser based ML platform. It has a visual drag-and-drop environment where there is no requirement of coding. They have published comprehensive tutorials and sample experiments for newcomers to get the hang of the tool quickly

KNIME is awesome for training machine learning models. It takes some getting used to initially but the GUI is awesome to get started with. It produces results on par with most tools and is free of cost as well

IBM Watson Studio provides a beautiful platform for building and deploying your machine learning and deep learning models. You can interactively discover, clean and transform your data, use familiar open source tools with Jupyter notebooks and RStudio, access the most popular libraries, train deep neural networks, among a vast array of other things.

Amazon Lex provides an easy-to-use console for building your own chatbot in a matter of minutes. You can build conversational interfaces in your applications or website using Lex. All you need to do is supply a few phrases and Amazon Lex does the rest! It builds a complete Natural Language model using which a customer can interact with your app, using both voice and text.

MLJar is a browser based platform for quickly building and deploying machine learning models. It has an intuitive interface and allows you to train models in parallel. It comes with built-in hyper-parameters search and makes deploying your model easier. MLJar offers integration with NVIDIA's CUDA, python, TensorFlow, among others.

Ludwig is a toolbox that allows to train and test deep learning models without the need to write code.

Lobe is an easy-to-use visual tool that lets you build custom deep learning models, quickly train them, and ship them directly in your app without writing any code.

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For videos and other reports, you can see a link to 25 key milestones of the non-profit via this link https://goo.gl/Hc5Bhd