



Offering
New Measures
of Insight
into Data and Images
www.3d-metrics.me

Sabine K McNeill
21a Goldhurst Terrace
London NW6 3HB
Tel: 0044 20 7328 3701
sabine.mcneill@3d-metrics.com

Visual Data Intelligence Modules

Understanding Images and Structured Data for Smart Knowledge

[Understanding, Demystifying and Addressing the Data Skills Gap](#)¹ is a report that [techUK](#)² produced in October 2016. In the order of advertised job vacancies, it outlines eight required levels.

We address them with our new [Smart Knowledge Engine](#)³ in a slightly modified way, as our *online Software As A Service* visualises three types of data: multi-dimensional spreadsheets and time series as *structured* and images as *un-structured* data.

The bracketed terms are our '*3d metric qualifications*' of the generic skill titles:

1. *[Structured]* Data Analyst
2. *[Structured]* Data Infrastructure Engineer
3. *[Image Analyst]* Solutions Architect
4. *[Structured]* Data Scientist
5. Big *[Business & Very Big Science]* Data Developer
6. *[Structured]* Data Integration Engineer
7. *[Structured Data]* Visualisation Expert
8. Chief *[Structured]* Data Officer

[Professor Calderbank](#)⁴ has addressed the need for data skills in [Data+ courses](#)⁵ at Duke University in North Carolina. By creating inter-disciplinary problem solving teams of three under-graduates for a course, he recommends them to course sponsors for employment - after ten weeks of joint discovery of data and tools.

Our [Visual Data Science](#) course aims at tutors, students and executives who are willing to learn the use of our new data visualisation tool. Its uniqueness is due to novel mathematical concepts that are not derived from conventional mathematics, but need to be expressed as code.

[Digital Transformation](#)⁶ causes changes in cultural mind sets in academia and in industry. Our course will bring clarity, insights and understanding into the overload of software and data.

For the purpose of employment, course modules address the above skill levels as follows:

1. Structured Data Analysis
 - The challenges of storing, analysing and visualising multi-dimensional data and time series.
 - Reports, references and what distinguishes our Smart Knowledge Engine.
2. Structured Data Infrastructure
 - File formats, data mining, web crawlers, cloud storage and file retrieval.

¹ <https://3dmetricsdotme.files.wordpress.com/2017/01/17-01-25-techuk-big-data-skills-gap.pdf>

² <http://www.techuk.org/>

³ <http://www.smart-knowledge-portals.uk/>

⁴ <http://ece.duke.edu/faculty/robert-calderbank>

⁵ <http://ece.duke.edu/about/news/data-savvy-students>

⁶ https://en.wikipedia.org/wiki/Digital_transformation

- Why images are not 'un-structured' in our 3d metric universe.
3. Image Analysis
 - The magic of turning 2D images into 3D movable objects.
 - The applications and benefits of automating image analysis.
 4. Structured Data Science
 - What do we see when we layer multi-dimensional data?
 - What does the data reveal when it is sorted?
 5. Big Business & Very Big Science Data
 - Business Metrics measure the flow of money and products as well the performance of staff and customers.
 - In Science, our software helps to develop new qualitative measures relating to all phenomena in the world of microscopic and telescopic images, as well as cameras.
 6. Structured Data Integration
 - From Data Silos to clusters and landscapes of Data Profiles.
 - How our visualisations bring measurements and images together over time.
 7. Structured Data Visualisation
 - What do we see when we look at the new visualisation styles?
 - How do we turn data visualisations into data stories?
 8. Structured Data Expertise
 - A full overview of re-visualising images, multi-dimensional data and time series in our new way with its benefits as well as corporate and scientific implications.

Students are expected to co-create projects and solve problems they feel passionate about.

No prior knowledge is assumed.