



Confidential

Data Science at Credit Suisse

May 2017

Agenda

1. Setting The Scene
2. Enablers -The Analytics Team
3. Compliance Intelligence
4. How we enable the Compliance World
5. What are we looking for?
6. How to apply?

Setting the Scene – Why focus on Compliance?

Since financial crisis, banks have become more worried about **quantifying risks** & less keen on designing exotic products.

Carnegie Mellon has cancelled Advanced derivatives courses and have started offerings in **Risk Management**.

It is estimated that a typical organization loses about **5% of its revenue to fraud** every year. If not under control, fraud can cause substantial economic damages to any type of business.



Enablers - The Analytics Team Has a Unique Set of Skills...

PHD in
Computer
Science

PHD in
Economics

Master in
Econometrics

PHD in
Computational
Physics

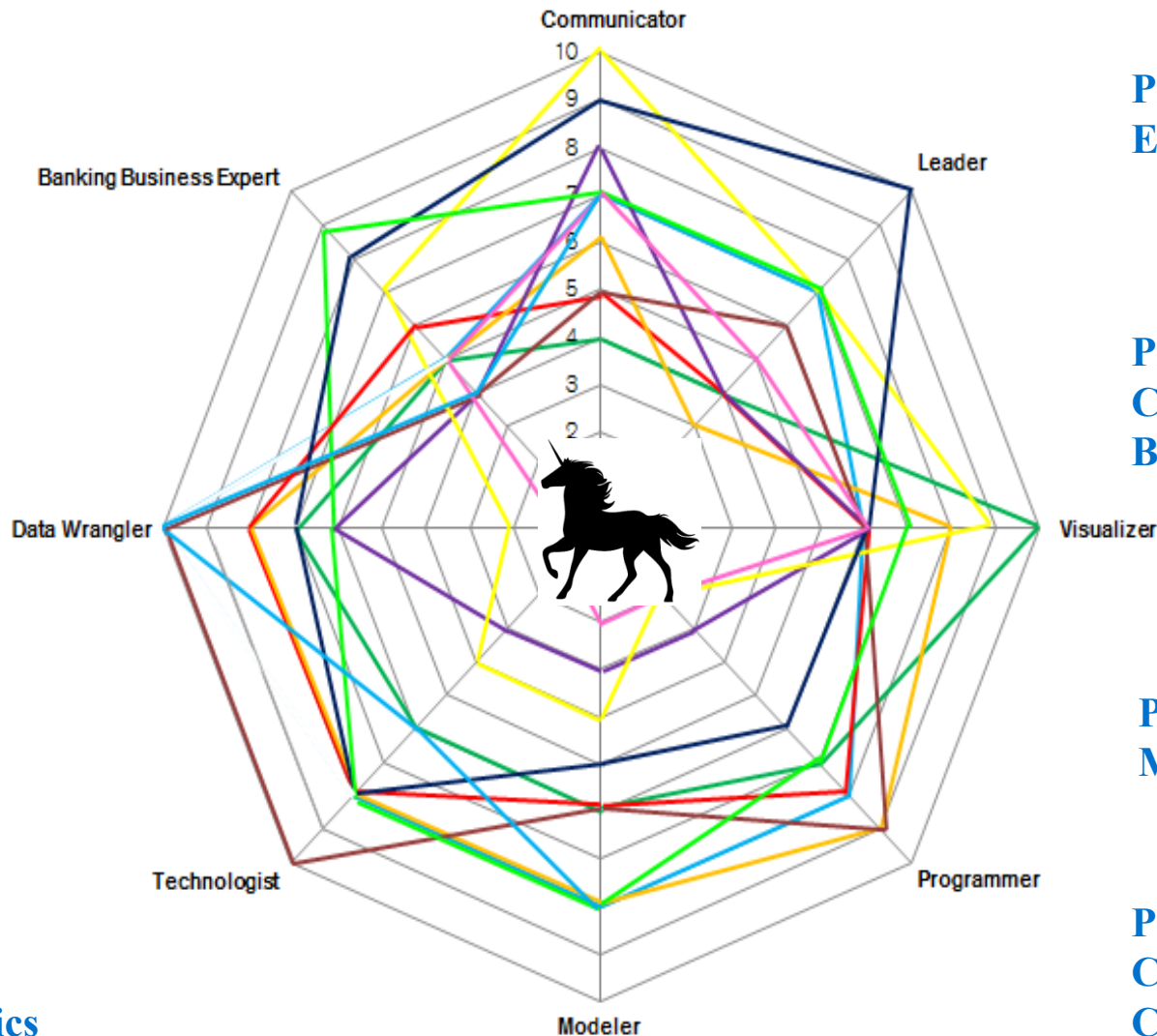
PhD in Statistics

PHD in High-
Energy Physics

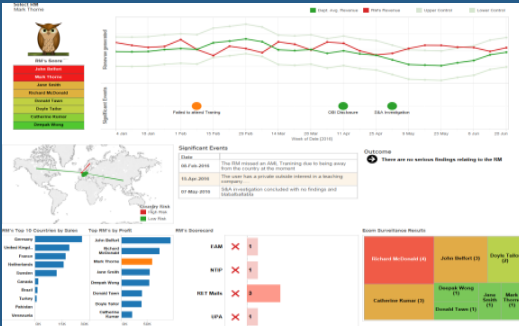
PHD in
Computational
Biology

PHD in Applied
Mathematics

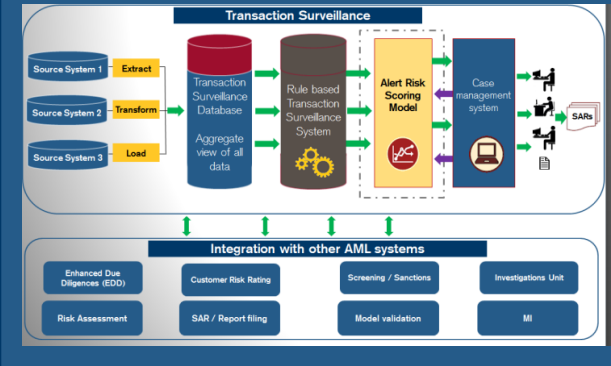
PhD in
Computational
Chemistry



Employee Surveillance

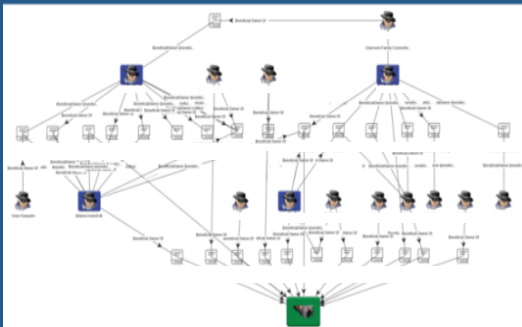


Compliance Metrics



Compliance Intelligence

Investigations

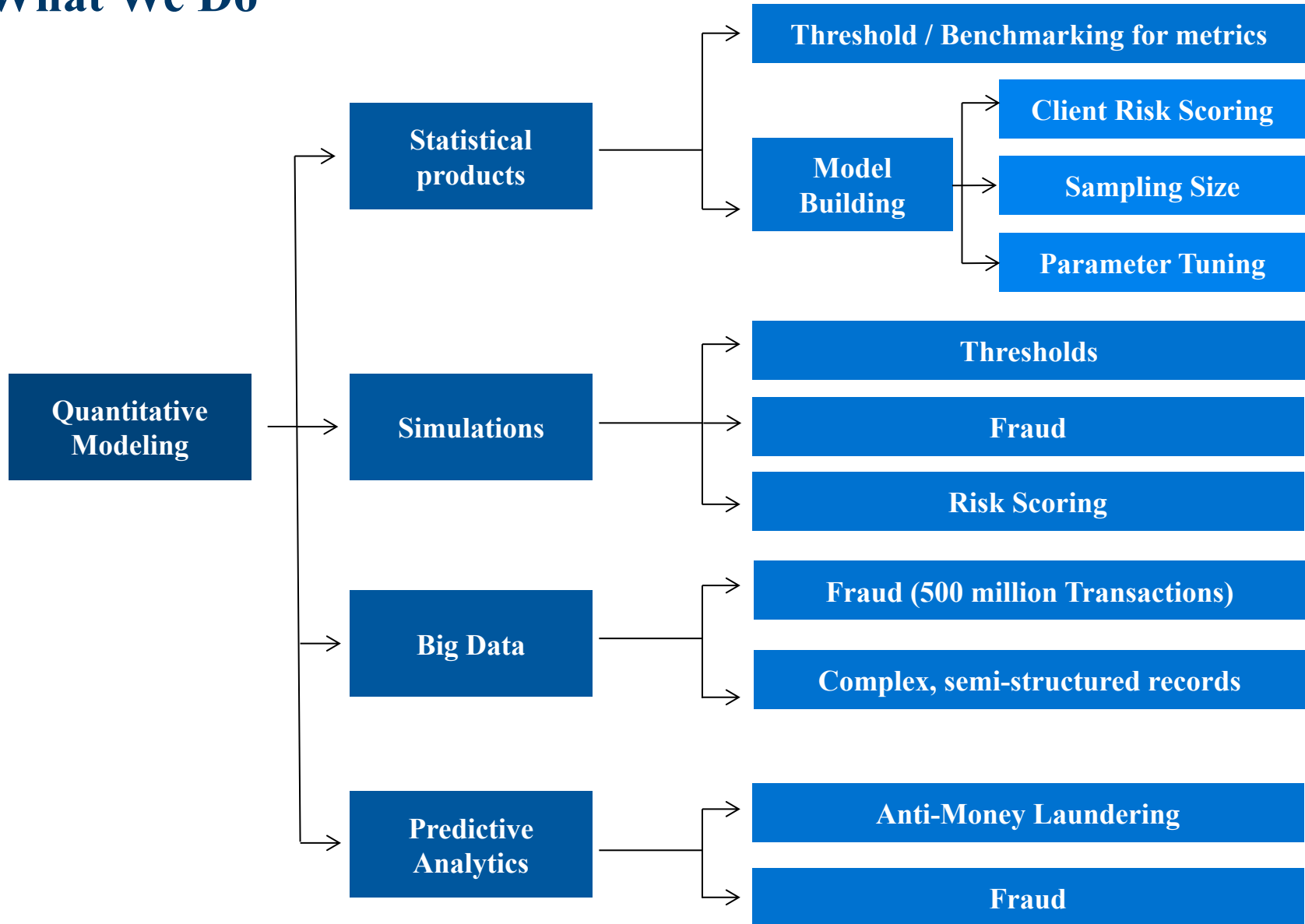


Client Surveillance



Get the Right data to the Right person at the Right time.

What We Do



What is fraud?

Insurance fraud
Anti-money laundering
Credit card fraud
Corruption
Healthcare fraud
Tax evasion
Counterfeit
Review comments on websites
(amazon, booking.com, ...)
Click fraud
Computer hacking



There are two important main steps in fraud analytics:

Fraud detection: backward looking
Fraud prevention: forward looking

Technology scale	1	2	3	4	5	6	7	8	9	10
Value add for Business	1	2	3	4	5	6	7	8	9	10

Challenges related to Fraud

There are many issues and challenges related to fraud detection and prevention:

Current fraud systems are based on **rule-based decisions**. However, **fraudsters are smart** and will most likely not try to inject money in a standard way.

A main issue with fraud detection is the high rate of **false positives**, A high false positive rate leads to:

- Costs to the business with respect to the manual investigations required
- Reputational loss in case a true alert is missed

Moreover, the number of **false negatives** i.e. real frauds that gets missed, are usually high and leads to investigations.

Finding Fraud is like finding needle in the Haystack...



Industrialization of Data Science

Created **Central intelligence**

Model factory-automation and scalability to the process of building and deploying predictive models.

Built strong **Data foundation**

Speed of new application development and deployment

Willingness to experiment and the direct way data innovates business models and business operations

Analytics market place-domain specific analytics micro-applications that drive innovation.



SMART DATA- No matter if it is big or small data, it is still data and we aim to get more value out of it.

What are we looking for?

Job Openings in Our Team

Senior Analyst for Compliance Metrics Team	https://tas-creditsuisse.taleo.net/careersection/internal_jobdesc/jobdetail.ftl?job=094880&lang=en
Compliance Metrics Data Analyst	https://tas-creditsuisse.taleo.net/careersection/internal_jobdesc/jobdetail.ftl?job=094881&lang=en
Data Scientist for Compliance Division	https://tas-creditsuisse.taleo.net/careersection/internal_jobdesc/jobdetail.ftl?job=094884&lang=en
Senior Data Scientist for Compliance Division	https://tas-creditsuisse.taleo.net/careersection/internal_jobdesc/jobdetail.ftl?job=095145&lang=en
Data Scientist & Tableau Expert	https://tas-creditsuisse.taleo.net/careersection/internal_jobdesc/jobdetail.ftl?job=093540&lang=en
Data Scientist / Holistic Surveillance for Compliance Metrics	https://tas-creditsuisse.taleo.net/careersection/internal_jobdesc/jobdetail.ftl?job=094886&lang=en
Jun. Project Manager for Compliance Analytics & Data Science	https://tas-creditsuisse.taleo.net/careersection/internal_jobdesc/jobdetail.ftl?job=089824&lang=en

What are we looking for?

Your Profile

You Offer

- A PhD or Master degree in a quantitative field (Statistics, Mathematics, Economics) or Information Technology
- You have gathered at least 5 years' experience in Statistical Modelling (Classification, Scorecard Models, Segmentation, Clustering, Bayesian statistics), Anomaly Detection, and/or Machine Learning algorithms both Supervised and Unsupervised
- Strong experience in the Regulated Technologies industry or compliance domain within the financial industry
- Knowledge in C, C++, Python, R, Java, Scala, SAS, SQL, or/and Spark
- You are familiar with SQL and relational database programming and distributed computing platforms and query interfaces such as MapReduce, Pig or/and Hive
- Fluency in English mandatory and German optional (written and spoken)
- If you have expertise in text mining, natural language processing this would be a strong plus
- Your excellent people management abilities and your good communication skills enable you to collaborate effectively and to build up professional relationships even with senior level executives
- Your high-level of confidentiality, integrity and responsibility enable you to deal with critical and confidential data
- You feel at ease in assembling data sets from disparate sources and analyze using appropriate quantitative methodologies, computational frameworks and systems
- As demonstrated standout colleague, self-starter, and independent thinker you are willing to cooperate in a highly collaborative environment and to contribute to the team's success
- You are willing to assume additional responsibilities and to become a respected know-how carrier in our team

What do we offer?

Data Scientist for Compliance Division # 095145

Switzerland-Region Zurich-Zürich | Full-time | VP - DIR | Corporate Functions | Legal & Compliance | Job ID 095145

Credit Suisse is a leading global wealth manager with strong investment banking and asset management capabilities. Founded in 1856, Credit Suisse has expanded to be a global force employing over 45,000 people in 50 countries. With new leadership, a new strategy and a streamlined global organization, we are set for growth. We partner across businesses, divisions and regions to create innovative solutions to meet the needs of our clients—and to help our employees grow. It is a high priority for us to continually invest in our employees by providing ongoing opportunities for training, networking and mobility. Join us and let's shape the future of Credit Suisse together.

We Offer

- The opportunity to become part of our highly motivated Analytics team in Credit Suisse Zurich focusing on building and driving new and state of the art technologies in various fields
- A challenging role as Senior Data Scientist in a dynamic, international and demanding environment using the latest innovations in predictive analytics and visualization techniques
- The chance to engage with external companies in automating regulation and compliance to build a state-of-the art regulatory reporting and analytics infrastructure
- You are responsible for developing, maintaining and extracting knowledge from strategic internal and external data sets
- Studying fundamental and high impact business questions that directly impact the direction of the company and industry at large
- Developing and designing algorithms, build prototype versions, run multiple validations with business experts and work on operationalization
- You will be part of an open-minded team with a strong team spirit that acts in a versatile, dynamic, and flexible working environment
- Open to discuss flexible / agile working

Join Us

Compliance Metrics Data Analyst (80-100%) #094881

Search

Clear

Show Search Criteria

Manage Job Alerts

Search Results (1 job found)

Sort by Posting Date (Descending Order)

Compliance Metrics Data Analyst (80-100%) #094881

Switzerland-Region Zurich-Zürich |
Corporate Functions | Job ID 094881 | Job
Posted: Apr 26, 2017

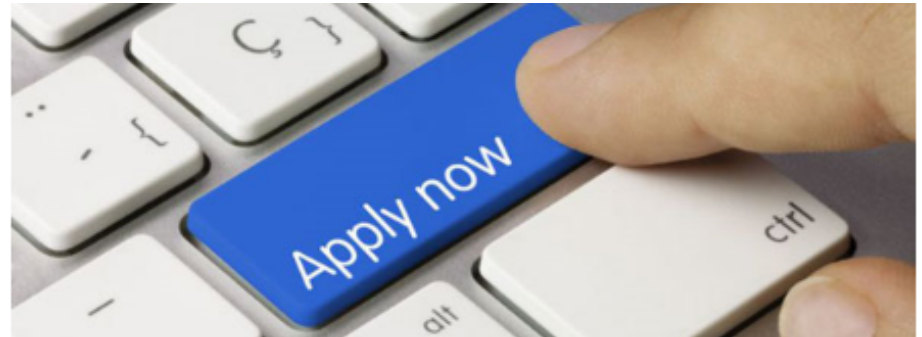
Apply Save Job

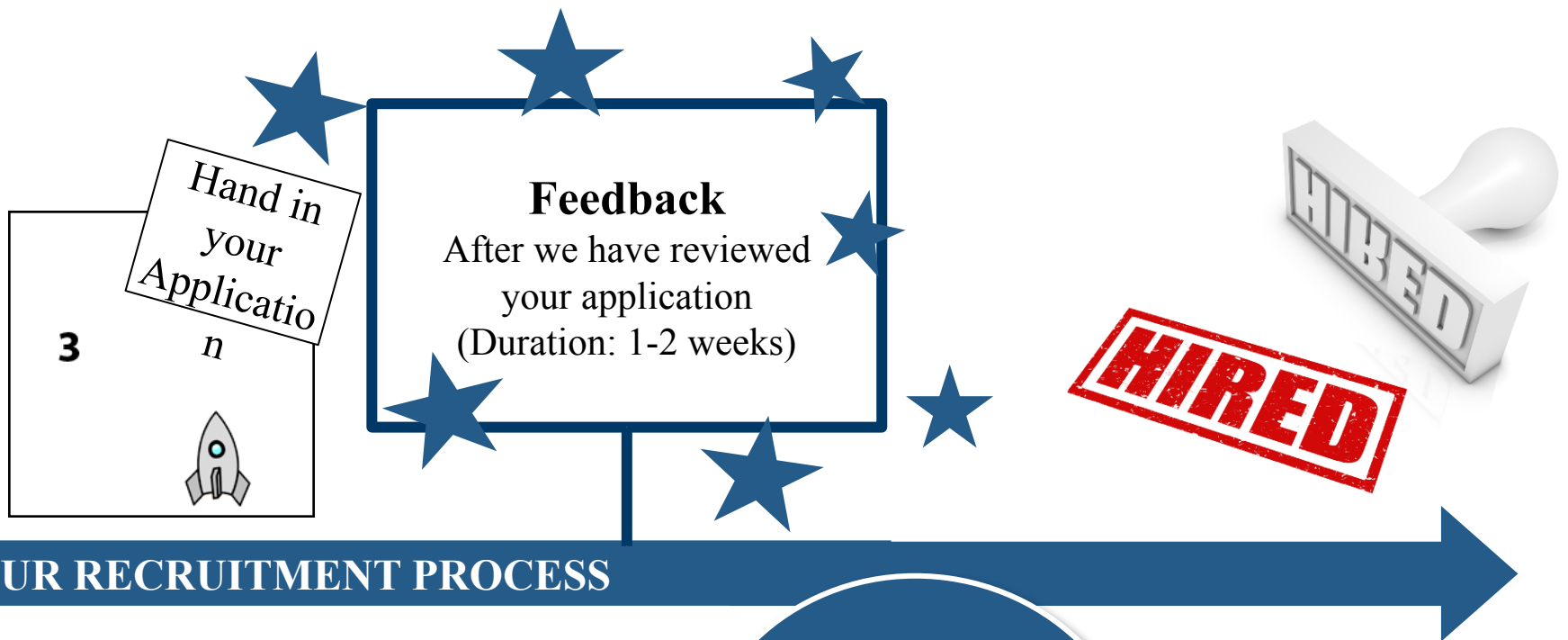
<https://www.credit-suisse.com/ch/en/careers/search-and-apply.html>

How to apply

Include the following documents in your application

- CV
- Letter of motivation
- Diplomas
- Work certificates
- Copy of your passport (& work permit)





**Video
Interview**

**Business
Case**

**Business
Interview**

**HR
Interview
&
Online
Assessment**

