

The background of the image is a blurred, futuristic scene. It features a series of curved, parallel lines that create a sense of depth and motion, leading the eye towards a city skyline in the distance. The sky is filled with soft, golden light from a setting or rising sun, with some clouds visible. The overall color palette is dominated by blues, greys, and warm oranges from the sunset.

# **DATA SCIENCE MEETS COMPLIANCE**

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# WHAT EXACTLY IS DATA SCIENCE?

- Massive influx of data & improved ability to properly handle it
- Blend of various tools, algorithms and machine learning principles with the goal to discover hidden patterns from raw data
- Primarily used to make decisions and predictions making use of predictive casual analytics, prescriptive analytics, and machine learning
  - Predictive Analytics: Using data to create a model that can accurately tell what will happen in the future (i.e predict if customers will make future payments)
  - Prescriptive Analytics: Using data to supply recommendations based on trends (i.e self-driving cars)
  - Machine Learning & Artificial Intelligence: The ability to do the above without the need for human interaction



# WHAT EXACTLY IS COMPLIANCE?

- The process of making sure a company and employees follow all laws, regulations, standard, and ethical practices that apply to the organization
- The goal is to protect the business from any form of liability or litigation
- Should be integrated into all parts of the business
- Should be a seamless interaction with as few bumps and disruptions as possible
- Often dealing with an incredible amount of forms and applications



# THE PROBLEM

- Large amounts of paperwork make it difficult to sift out compliance mistakes
- Delayed discovery of mistakes leads to delays in handling of mistakes
- Delays in handling of mistakes open companies up to litigation and liability
- Need a quick and reliable way to process paperwork and flag possible issues
  - Expense Reports filed from non-sanctioned locations
  - Payments made to non-sanctioned parties
  - Large expenditures



## THE SOLUTION

- Incorporate geo-location data to identify types of locations
- Use Natural Language Processing tools to analyze report structure to identify possible inconsistencies
- Use Supervised Learning techniques to train models to automatically recognize anything that does not meet compliance standards
- Tune Machine Learning algorithm and incorporate it into cloud computing network to scan compliance data automatically