



## Constrata with Microsoft Azure

MACHINE LEARNING PLATFORM  
*optimizing beyond constraints*

**We integrate on your behalf with Constrata.** Microsoft Azure integrates the technology stack of the Machine Learning environment into a single managed platform, with the flexibility to respond to changing business and technology requirements.



## Your Machine Learning Challenges

- Do you find that the Prototyping, Development and eventual Production Deployment of Machine Learning solutions are distributed on so many different process platforms that integration is a far cry?
- Do you find that a consistent development life cycle for Machine Learning solutions is lacking?
- Do you have a testing environment where you can test prototyped solutions at full scale?

The number one complaint we hear in the market for Machine Learning solutions is the lack of platform integration.



## The Constrata Solution

- Constrata is designed and supported by real Machine Learning experts.
- Constrata provides cross-functional integration.
- Constrata provides full flexibility and scalability.
- Constrata prepares, explores and visualizes data by the application of Machine Learning algorithms.

Constrata is a flexible combination of different elements essential to implementing a wide range of data science solutions.



## Benefiting from powerful partners

- Our machine learning experts established full synergy with the Microsoft Azure cloud solution to render a platform that is **INTEGRATED, TRANSPARENT and USER-CENTRIC.**
- Multi-technology integration is supported and rigorous development processes are enabled.
- With Constrata as platform and our robust Machine Learning models you have peace of mind before deployment.

Driven by business requirements rather than technical constraints, testing and validation are done in a full-scale operational model.



# Praelexis Constrata on Microsoft Azure



**Constrata with Azure assists analysts who need to focus their resources on the strategic application of machine learning models on data lakes. Constrata does this by relieving the pressure on analysts to continually recreate the complete development cycle and by providing an end-to-end tech stack integration that remains highly customizable.**

## Covers the complete analytics value chain

- Exploration.
- Problem identification.
- Data acquisition.
- Model building.
- Testing and validation.
- Crafted solution deployed.

## Source to End Point

- Incorporating multivariate data sources.
- Presenting to multiple client end points.
- Can run completely in the Azure Cloud or with hybrid cloud and on-site options.

## Integrates the Tech Stack

- Batch (csv, xls, etc).
- Streaming (EventHub, Kafka, etc).
- Bulk Storage (BlobStore, Hadoop, HDFS, S3, etc).
- Machine Learning (Spark, Scikit.learn, Tensorflow, etc).
- Data Store (MongoDB, DocumentDB, ElasticSearch, etc).
- Dockerised API's (Flask, API Gateway, Swagger, etc).

# PRAELEXIS CONSTRATA

## CLIENT END POINTS

**DOCKERISED APIS** *Flask, API Gateway, Swagger, ...*

**DATA STORE** *MongoDB, DocumentDB, ElasticSearch, ...*

**MACHINE LEARNING** *Spark, Scikit.learn, Tensorflow, ...*

**BULK STORAGE** *BlobStore, Hadoop, HDFS, S3, ...*

**BATCH**

*CSV, XLS, ...*

**STREAMING**

*EventHub, Kafka, ...*

## CLIENT SOURCES

CONSTRATA LIBRARY (PYTHON)

# Praelexis Constrata on Microsoft Azure



Praelexis Constrata applies the expertise of machine learning in a unified platform that runs on Microsoft Azure. The underlying infrastructure of Microsoft Azure provides all clients with the ability to scale any aspect of the Constrata platform to enterprise level on an on-demand basis.

## Product Alignment

### Scalability

The ability to build solutions for smaller units, scaling it to enterprise level with the click of a button.



### Security

Using Microsoft security expertise to handle non-core competency related tasks.



### Technology diversity

Having state of the art technology at you fingertips.



# Implementation of a Recurrent Neural Network model in our client's production environment



Praelaxis as our Machine Learning partner developed our first end-to-end real-time Recurrent Neural Network Machine Learning solution on Constrata. This solution automated the Net Take Home Pay process which forms an integral part of the credit flow when our clients apply for a loan.

Scalable to enterprise level, we have implemented the solution in all our branches. It integrated seamlessly with our existing bank branch front-end system. This enhances both the consultant and the customer experience.

## Win Results

**A previously manual process is automated, which improves process efficiency and customer satisfaction.**

**The solution is developed in the cloud and deployed on premise in the client network. This optimizes scalability.**

**With high processing capability the model improves itself as the data volume increases. Each iteration of the model takes it forward.**