DZ BANK AG Data Analytics Journey
CIBP Spark

Düsseldorf, 24.11.2020, Jonathan Fell
1. Introduction
2. Data LAB
3. Data Analytics in Practise
Intelligent algorithms have been around for decades (e.g. neural networks since 1949) - why the hype now?

- Availability of appropriately powerful scalable hardware
- Rapidly increasing amount of data from various sources which also can be combined
- AI methods provide best results when trained on large datasets
- Ever-growing data science/data analytics community

One minute of internet activity
“ITKD enables DZ BANK AG to take advantage of data in a profitable and modern way”
First step: sharpen the distinction between Business Intelligence (BI) and Data Analytics

**BI:** Standardized Data Aggregation and rule-based computations, mostly SQL, descriptive and diagnostic

**Data Analytics:**
Complex Algorithms, trained models, predictive, prescriptive

“If you can do it with SQL, it most likely isn’t Advanced Analytics“
From idea generation to the finished, data-driven product

<table>
<thead>
<tr>
<th>ITKD Initiatives</th>
<th>Phase I</th>
<th>Data LABs</th>
<th>Phase II</th>
<th>Phase III</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI Day</td>
<td>KI Ideation Workshop</td>
<td>(Phase II) &quot;optional&quot;</td>
<td>Sprint Data LAB</td>
<td>Prototyping Data LAB</td>
</tr>
<tr>
<td></td>
<td>Use Case collection and evaluation</td>
<td>5 day workshop</td>
<td>3 months</td>
<td>Iterative Improvement and permanent re-evaluation of the previous results and algorithms</td>
</tr>
<tr>
<td></td>
<td>prioritisation</td>
<td>Problem statement</td>
<td>Focus on singular use case</td>
<td></td>
</tr>
<tr>
<td>Sharepoint</td>
<td>Preparation of Data LAB (Sprint and/or Prototyping)</td>
<td>Collection of solution proposals</td>
<td>Creation of a functional prototype (Proof of Concept)</td>
<td></td>
</tr>
<tr>
<td>Newsletter</td>
<td>Initial application</td>
<td>First assessment of the applicability of the solutions, the data quality and availability, the impact and costs</td>
<td>Definition of criteria of success and derivation of business KPIs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Risk analysis and Compliance assessment</td>
<td>Conception of a business plan and possible project application</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Commitment/Feasibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITKD Initiatives</td>
</tr>
<tr>
<td>AI Day</td>
</tr>
<tr>
<td>KI Ideation Workshop</td>
</tr>
<tr>
<td>Use Case collection</td>
</tr>
<tr>
<td>and evaluation</td>
</tr>
<tr>
<td>prioritisation</td>
</tr>
<tr>
<td>Preparation of Data</td>
</tr>
<tr>
<td>LAB (Sprint and/or</td>
</tr>
<tr>
<td>Prototyping)</td>
</tr>
<tr>
<td>Initial application</td>
</tr>
<tr>
<td>Sprint Data LAB</td>
</tr>
<tr>
<td>5 day workshop</td>
</tr>
<tr>
<td>Problem statement</td>
</tr>
<tr>
<td>Collection of solution</td>
</tr>
<tr>
<td>proposals</td>
</tr>
<tr>
<td>First assessment of</td>
</tr>
<tr>
<td>the applicability of</td>
</tr>
<tr>
<td>the solutions, the</td>
</tr>
<tr>
<td>data quality</td>
</tr>
<tr>
<td>and availability, the</td>
</tr>
<tr>
<td>impact and costs</td>
</tr>
<tr>
<td>Risk analysis and</td>
</tr>
<tr>
<td>Compliance assessment</td>
</tr>
<tr>
<td>Prototyping Data LAB</td>
</tr>
<tr>
<td>3 months</td>
</tr>
<tr>
<td>Focus on singular use</td>
</tr>
<tr>
<td>case</td>
</tr>
<tr>
<td>Project</td>
</tr>
<tr>
<td>Iterative Improvement</td>
</tr>
<tr>
<td>and permanent re-eval-</td>
</tr>
<tr>
<td>uation of the previous</td>
</tr>
<tr>
<td>results and algorithms</td>
</tr>
<tr>
<td>Connection to operative</td>
</tr>
<tr>
<td>systems/Transition into</td>
</tr>
<tr>
<td>new FMoO (Future Mode of Operation)</td>
</tr>
<tr>
<td>Definition of rolls and</td>
</tr>
<tr>
<td>processes for permanent</td>
</tr>
<tr>
<td>maintenance of the</td>
</tr>
<tr>
<td>systems</td>
</tr>
</tbody>
</table>
Trend LAB AI: 2 months of intensive topical work to propose approaches to the subject of Data Analytics

20+ Participants
15 Companies
12 Guest Talks
8 Use Cases

Further Stakeholders

Definition AI
DZ BANK AG gave itself a set of guidelines to further Data Analytics efforts and streamline the development of data driven products and applications.
1. Introduction
2. Data LAB
3. Data Analytics in Practise
Data Sprint LAB: 5 days of concentrated Use Case discussion

Summary
- Three use cases of Business Intelligence- and Advanced Analytics-methods were discussed
- Focus on value-creation and customer satisfaction
- Modern, contemporary methods of Data Analytics require a different legal framework for data storage, transmission and handling
- Privacy is paramount to this topic and was already a hot topic in this preliminary LAB
- Completely remote

Use Case 1: Customer Classification
- Using Clustering/Classification accounts are categorized and evaluated regarding the affinity to certificates.
- Customers can be addressed in a personalized and customer-oriented way
- New products can be created targeting specific customer groups
Data Prototyping LAB: three months for a Proof of Concept and a Business Case

Summary

- Allows for a detailed discussion between Data Scientists, the department and other stakeholders (legal department, compliance)
- Ensures that a subsequent project is technically and economically feasible

CRISP-DM

Model development
Data preparation
Model development

Data understanding

Technology

Analytics

Evaluation

Deployment

Core Business

Communication
1. Introduction
2. Data LAB
3. Data Analytics in Practise
Project: Compliance AI

**Background:**
- Legal norms are currently distributed manually within the bank
- AI model predicts the probability that a norm is relevant for some unit/group/department
- Final decision remains with the compliance department experts

**Challenges and opportunities:**
- Development process not appropriate for AI software
- Revision process for AI is in development
- Enthusiasm and cooperativeness at all stakeholders
- First mover advantages

**Business model**
- AI as a supportive tool which enables employees to have more time for non-automatable work
- Final decision always stays with human decision makers
- Solution- and customer-oriented
The DZ BANK AG Data Analytics Journey

Promotion / Use Case Acquisition
- Community
  - Newsletter, Sharepoint
- Advertisement
  - Intranet, Posters
- Events
  - AI Day (planned)

Demonstration of Value
- Data LABs
- Success Stories
- PoC Use Cases
- Consultancy Work

Operationalization & Rollout
- Resources, Projects
- Technology & Platforms
- Centre of Excellence
- Data Strategy

GET
BUILD
GROW
Thank you for your attention

Contact:
datalab@dzbank.de