Machine Learning & Artificial Intelligence Meetup Bern

6. Stock

Sponsoring:

Machine Learning & Artificial Intelligence Meetup Bern

Vernetzung in der Region Bern

Austausch über Themen aus der Praxis

Sponsoring:

Machine Learning & Artificial Intelligence Meetup Bern

Nächstes Meetup: Montag 27.08.2018

Zwei Talks à je 15 Minuten

Details:

http://meetu.ps/e/Frl31/zXhCf/f

Inhalt:

https://github.com/mlbe

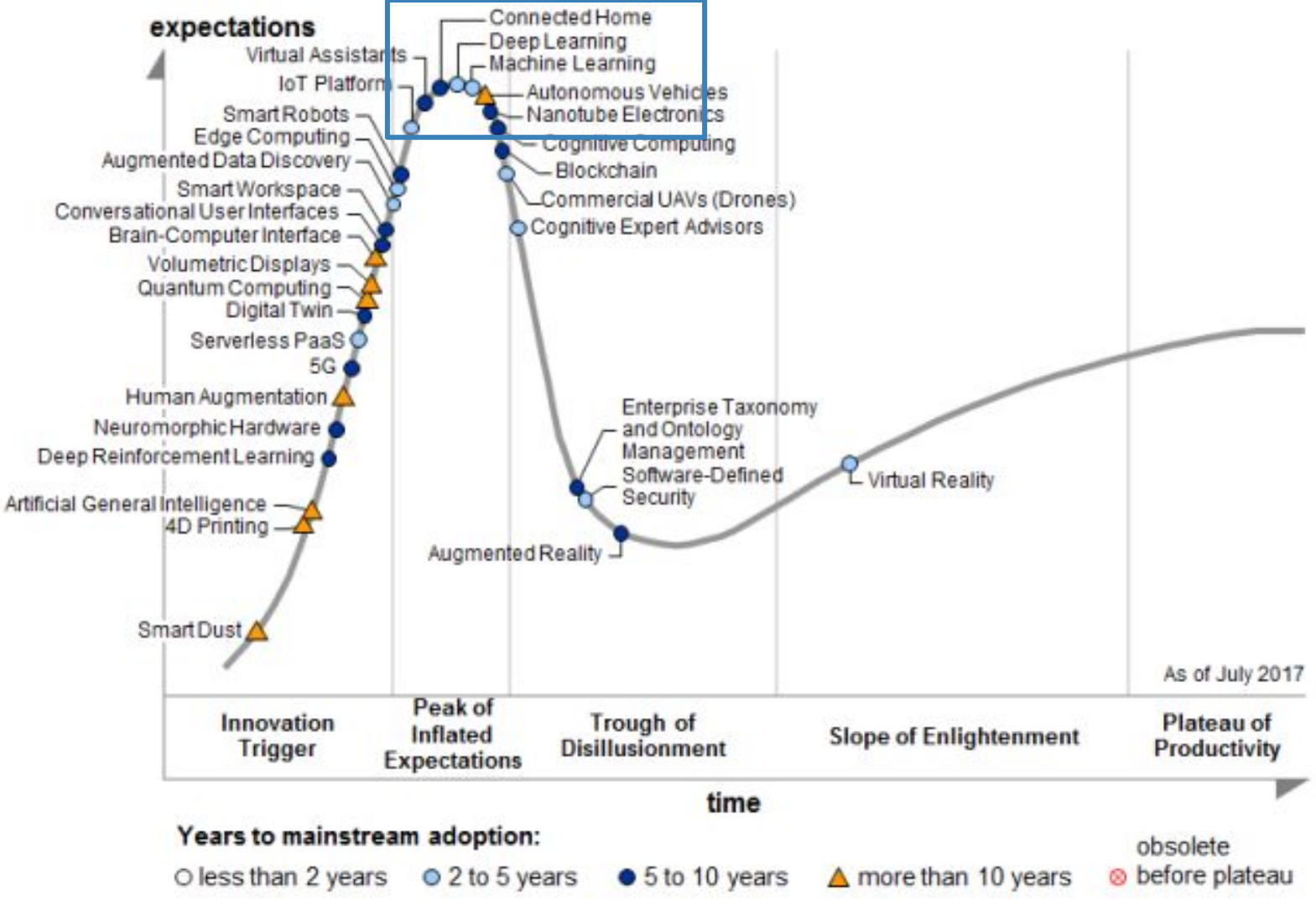
Sponsoring:

dsi engineering ag

zühlke empowering ideas

dsi
engineering ag

Applied Machine Learning


expectations
Connected Home
Deep Learning
Machine Learning
Virtual Assistants
IoT Platform
Autonomous Vehicles
Nanotube Electronics
Smart Robots
Edge Computing
Cognitive Computing
Augmented Data Discovery
Blockchain
Smart Workspace
Commercial UAVs (Drones)
Conversational User Interfaces
Cognitive Expert Advisors
Brain-Computer Interface
Volumetric Displays
Quantum Computing
Digital Twin
Serverless PaaS
5G
Human Augmentation
Enterprise Taxonomy and Ontology Management
Neuromorphic Hardware
Software-Defined Security
Deep Reinforcement Learning
Virtual Reality
Artificial General Intelligence
4D Printing
Augmented Reality
Smart Dust
As of July 2017
Innovation Trigger
Peak of Inflated Expectations
Trough of Disillusionment
Slope of Enlightenment
Plateau of Productivity
time
Years to mainstream adoption:
less than 2 years
2 to 5 years
5 to 10 years
more than 10 years
obsolete before plateau

Florian Lüscher

Software Engineer and Co-Founder

Skills

- Solution Architecture
- Cloud & Continuous Delivery
- Machine Learning
- Java, Python, .NET (Core)
- Web

CV

- 2018
  dsi engineering ag
- 2013 - 2018
  Zühlke Engineering AG
- 2010 - 2013
  FHNW Computer Science
- 2005 - 2009
  Software Development
  Apprenticeship

Matthias Brun

Software Engineer and Co-Founder

Skills

- Software Engineering
- Digitalisation and Innovation
- Microservices and Cloud
- Java, Spring, .NET
- Web

CV

- 2018
  dsi engineering ag
- 2016 - 2018
  FHNW MSc BIS
- 2013 - 2018
  Zühlke Engineering AG
- 2010 - 2013
  FHNW Computer Science
- 2011 - 2013
  Webdeveloper StudCom
- 2005 - 2009
  IT System Administrator Apprenticeship

“

I have an idea…

Florian Lüscher • 1.

Software Engineer and Co-Founder at dsi engineering AG, Machine Learning Trainer, Robo Challenge Organizer, Team Player

Zürich und Umgebung, Schweiz

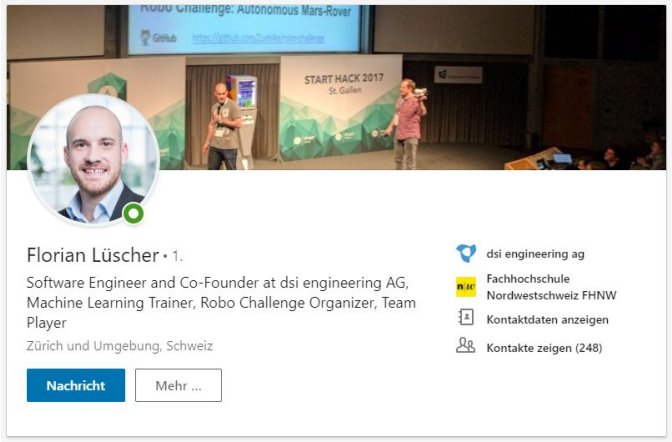
Nachricht | Mehr ...

dsi engineering ag

Fachhochschule Nordwestschweiz FHNW

Kontaktdaten anzeigen

Kontakte zeigen (248)



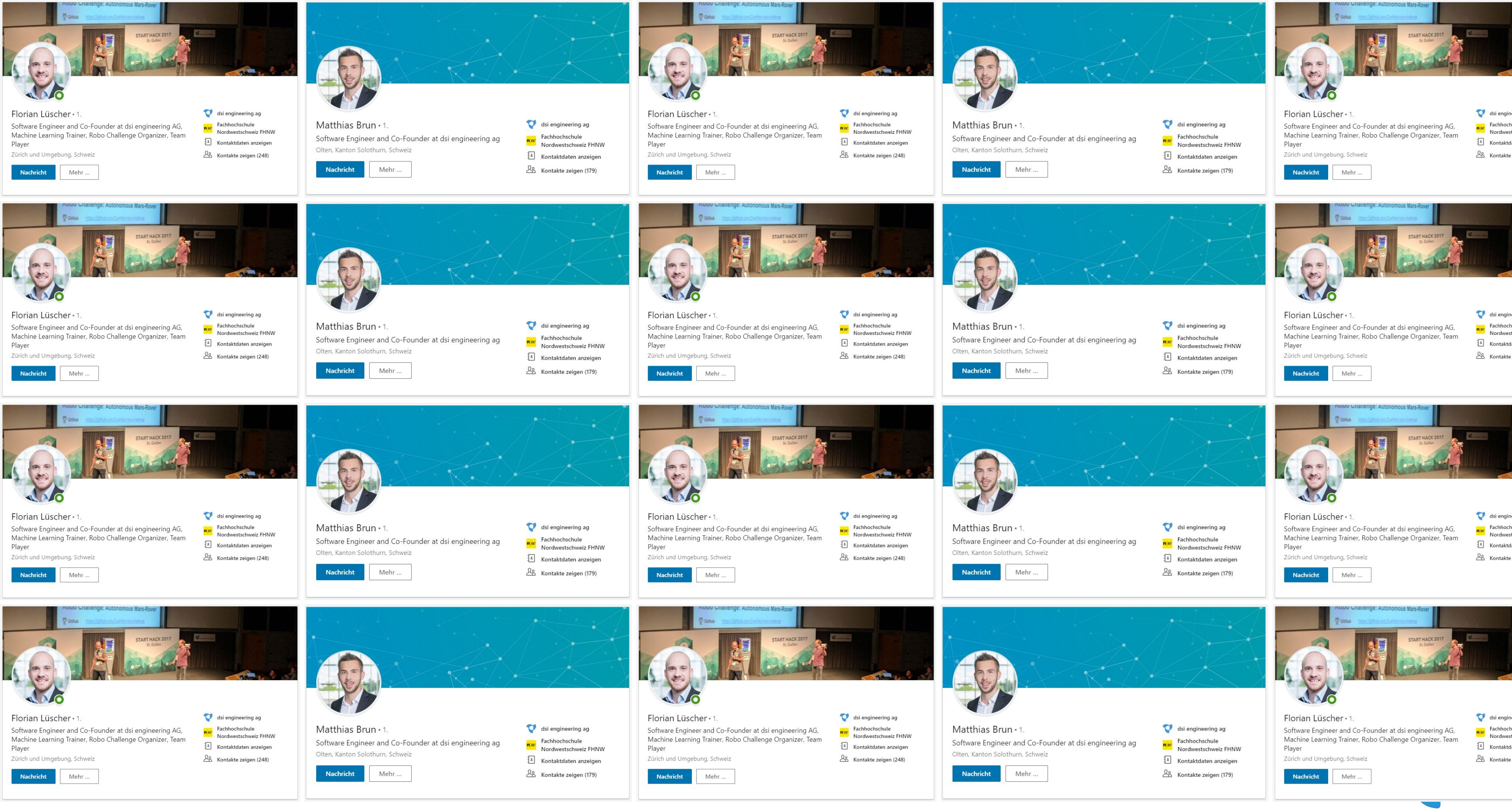
Software Engineer

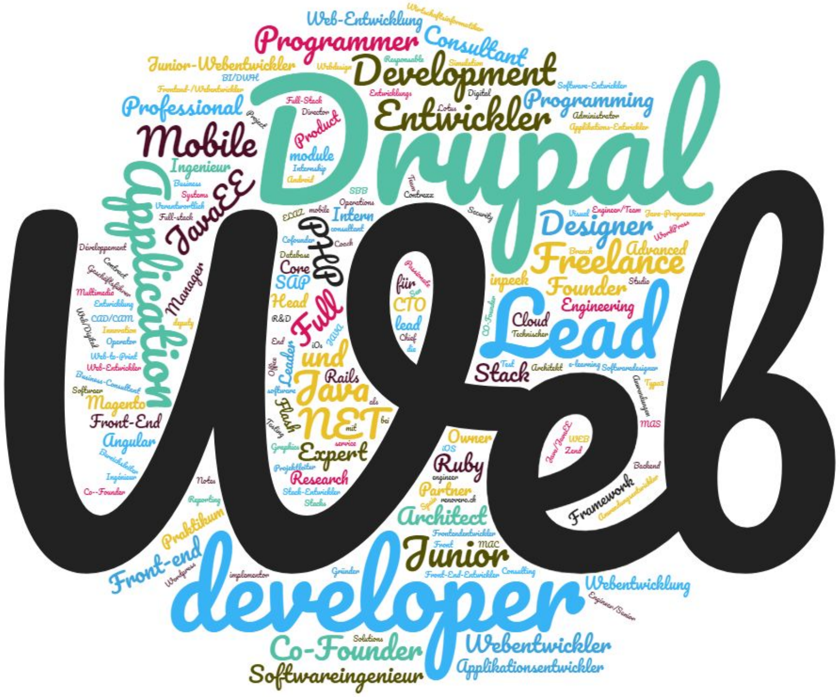
Project Leader

Software Architect

System Administrator

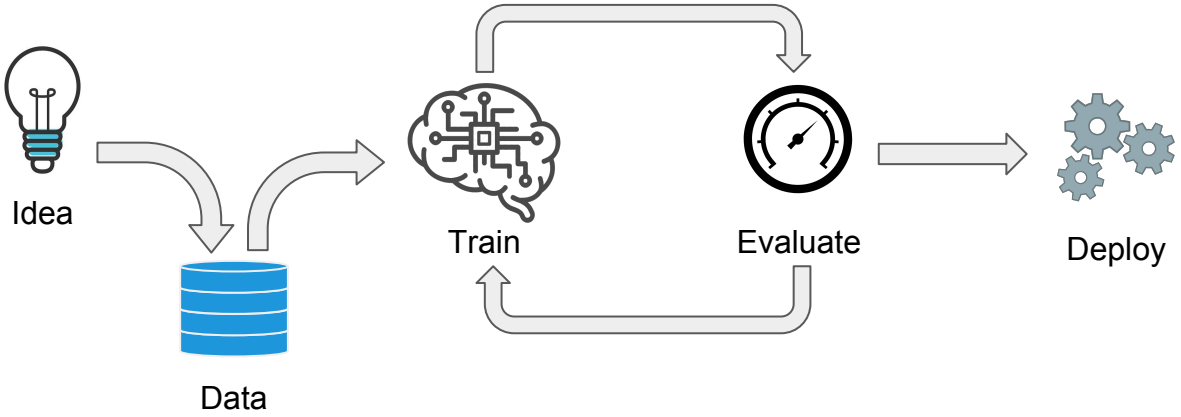
.....


Robo Challenge: Autonomous Mars-Rover
START HACK 2017
St. Gallen
Florian Lüscher • 1.
Software Engineer and Co-Founder at dsi engineering AG, Machine Learning Trainer, Robo Challenge Organizer, Team Player
Zürich und Umgebung, Schweiz
Nachricht
Mehr ...
dsi engineering ag
Fachhochschule Nordwestschweiz FHNW
Kontaktdaten anzeigen
Kontakte zeigen (248)
Matthias Brun • 1.
Software Engineer and Co-Founder at dsi engineering ag
Olten, Kanton Solothurn, Schweiz
Nachricht
Mehr ...
dsi engineering ag
Fachhochschule Nordwestschweiz FHNW
Kontaktdaten anzeigen
Kontakte zeigen (179)


Web
Drupal
developer
Lead
Application
Development
Entwickler
Programmer
Consultant
Mobile
Professional
Programming
Designer
Freelance
Founder
JavaEE
PHP
Full
Java
.NET
und
Expert
Junior
Architect
Co-Founder
Webentwickler
Softwareingenieur
Applikationsentwicklung
Webentwicklung
Front-end
Front-End
Angular
Magento
Ruby
Research
Partner
Owner
Stack
Cloud
Engineering
CTO
Head
SAP
Core
Intern
Manager
Praktikum
Framework
Rails
Flash
Web-Entwicklung
Junior-Webentwickler
Ingenieur
module
Product
Advanced
inpeek
für
lead
Leader

Challenge #0

Project Management



Evaluate Feasibility

Conduct workshop with customer to evaluate his ideas and challenge assumptions. Define **metrics and requirements**.

Analyze initial dataset or possible sources of data. Create proof of concept building up infrastructure.

Iteratively Build Model

Iterative exploration of different features, models and hyper-parameters.

Evaluate developed models and share insights with customer.

Challenge #1

Get the data

Scraping the internet

We can of course get lots of data from the internet.

This information is **heterogenous** and quality assurance and preprocessing is difficult.

Imbalanced and missing data makes it hard to train a model.

GDPR - Data Privacy Laws

Even if we have the data - that does not mean we are **allowed to use it**.

With GDPR lots of things changed, and it is not really clear how it will be applied in practice.

Software Engineer and Co-Founder at dsi engineering AG, Machine Learning Trainer, Robo Challenge Organizer, Team Player

Education

- Fachhochschule Nordwestschweiz FHNW: **Bachelor of Science (BSc) Computer Science**
- GIBS Solothurn: **Informatik Schwerpunkt Applikationsentwicklung eidg. Informatiker EFZ Software Developer**

Skills

- Java
- Software Development
- Machine Learning

Positions

Co-Founder, Software Engineer
dsi engineering ag
4.2018 - 5.2018

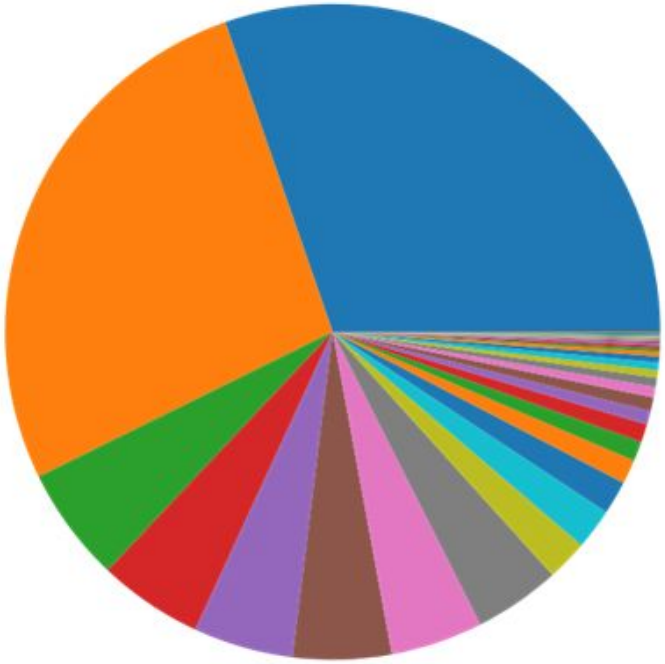
Beruf auswählen ▾

Software Engineer
Zühlke Group
9.2013 - 3.2018

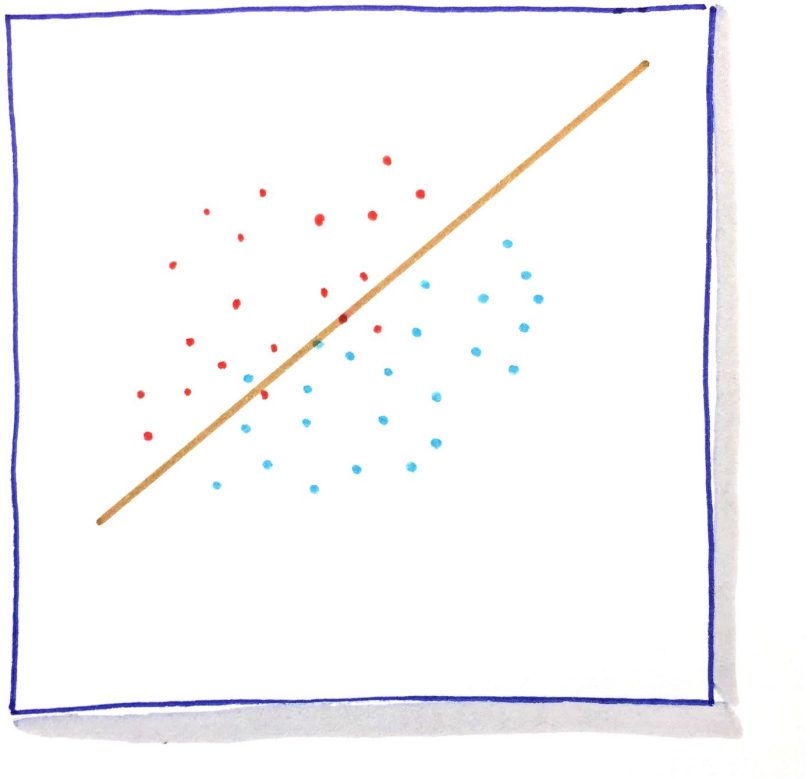
Beruf auswählen ▾

System Engineer
KCS.net
8.2009 - 8.2010

Beruf auswählen ▾

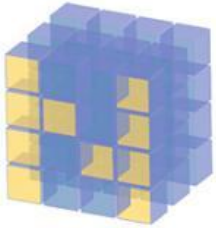


Build the Model



Frameworks

Caffe



NumPy

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WOW! Cool, thanks for your work!

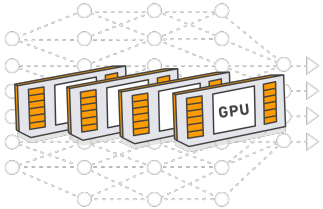
…but how can my customers use this?

Challenge # 2

Deploy the model to production

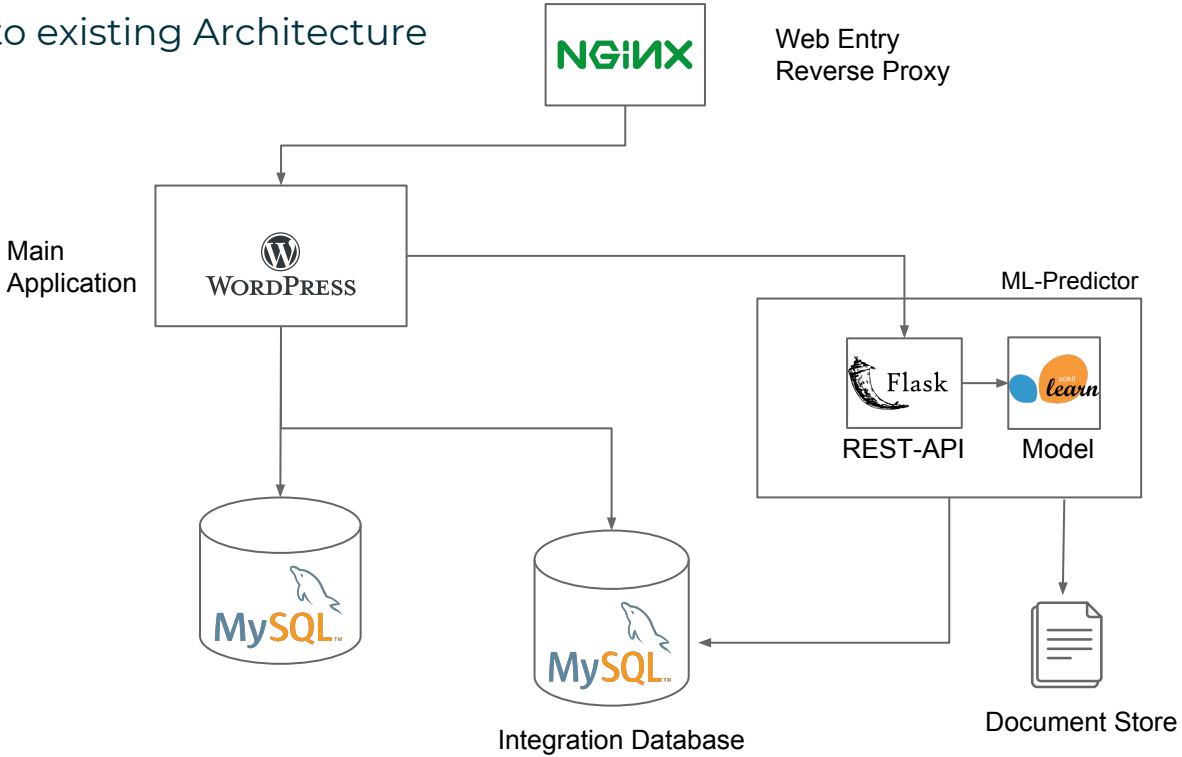
Depends on the technology used

and the resources needed



Deployment

Embed into existing Architecture



Challenge # 3

Operations

Monitoring

Regular best practiced need to be in place as well. But additionally, enhanced **Business Monitoring** needs to be developed.

Maintenance

Know-how regarding the used frameworks & platforms might not be available for the customer.

Challenge # 3

Monitoring

Keep an Eye on Business KPI

- Monitor the behaviour of the service in production
  - Regular service monitoring
- Provide a possibility to **correct predictions** where possible
  - Measure corrections closely
  - **Feed them back** to update the model later
- Have a **fallback** in place in case the predictor fails
  - Long response times might be a failure too

Challenge # 3

Maintenance

Ensure Lifecycle Management of the Service

- Use technologies already in place at the customer
- We provide **long running support** & operation contracts
- The **model has a lifecycle** as well
  - Does it need to be versioned?
  - How well can it handle framework upgrades?
- The learning pipeline can be **tested** too
  - A small subset of training data can be used for tests (when framework versions are upgraded e.g.)

We help you succeed