

Welcome!

The 2020 AMOS Demo Day

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AMOS H02

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The Professorship for Open Source Software



Industry Partners and Teaching Projects



Audi
Vorsprung durch Technik



BOSCH

Continental



methodpark

NEWSTORE



SOLYP

SENACOR

SIEMENS

sivantos
the hearing company

s software AG



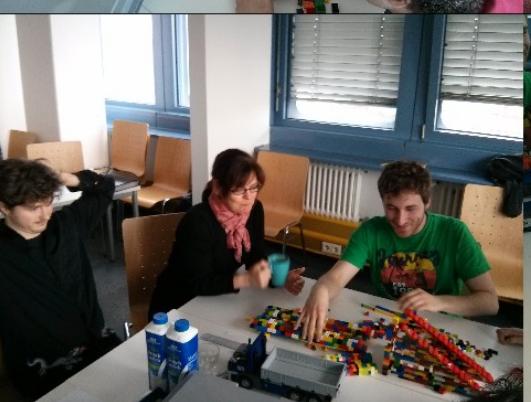
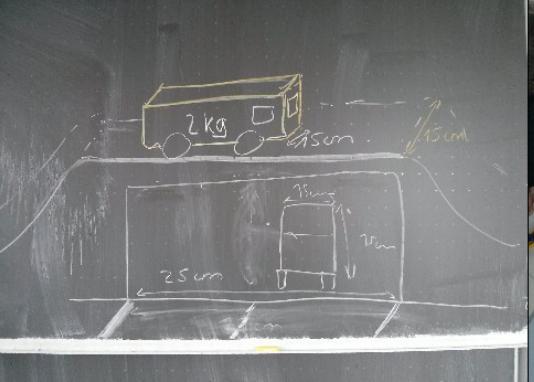
Volkswagen

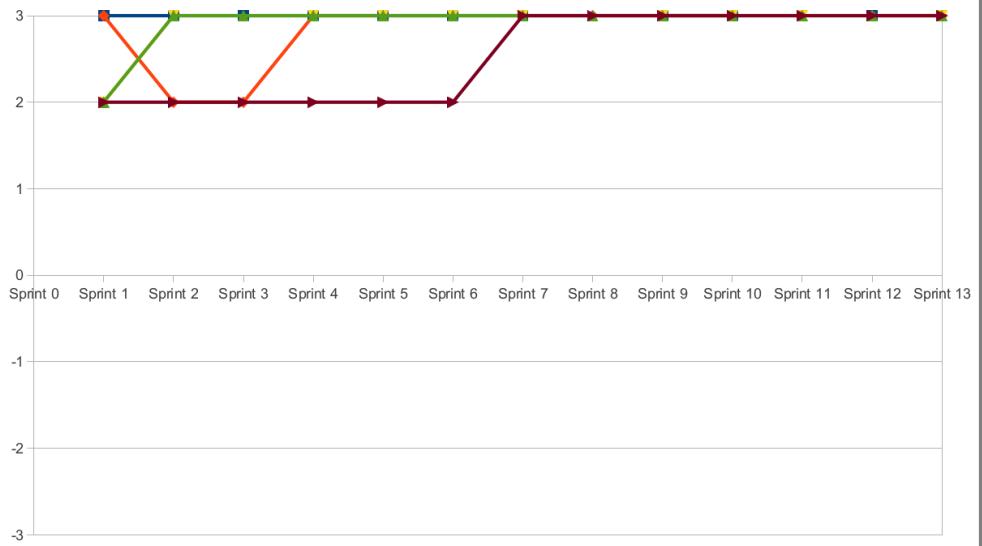
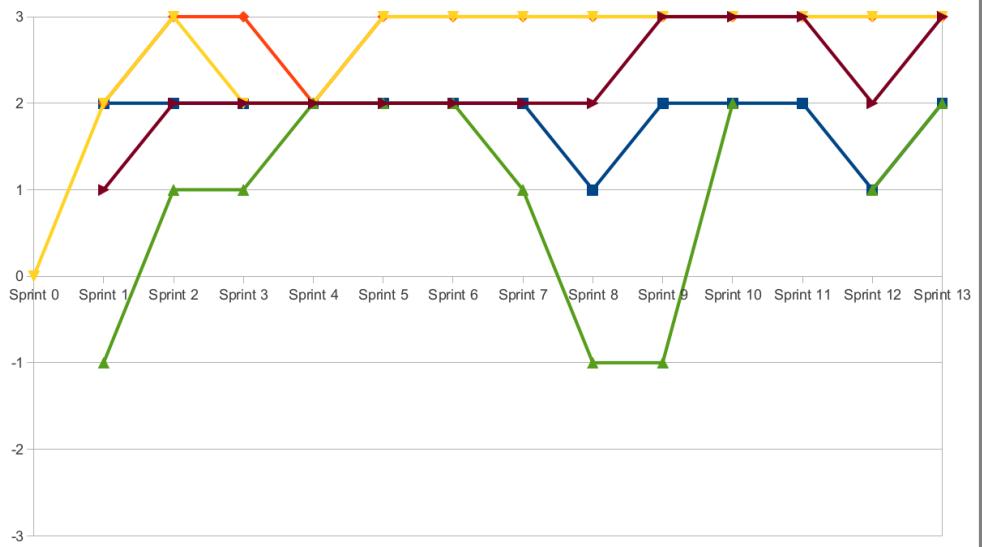
The AMOS Project
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The 2020 AMOS Projects

1. A tool for auditing software projects, with msg
2. A file system crawler for long-term storage, with GRAU Data
3. An app for on-the-spot job applications, with Consileon
4. Atomic cross-chain swaps for the block chain, with ChainSquad
5. Tagging mergers & acquisitions documents, wth Infineon
6. Real-time scheduler for Cloud Foundry, with DATEV
7. Transaction process mining, with adorsys
8. Declarative configuration of Cloud Foundry, with DATEV





Audit Tool

A web application that enables audit consulting of software projects based on the ISO/IEC 25010 standard.

The application helps a consultant to manage audits, monitor their progress and run interviews on the selected ISO/IEC factors and criterias.

Basisfragen

Existiert eine Planung, um das Qualitätskriterium in der Anwendung zu steigern?

Werden konkrete Maßnahmen ergriffen, um es beim Ablauf der Maßnahmen zu Problemen kommt?

Werden die Maßnahmen überwacht?

Existieren Maßnahmen, um die Effektivität und Effizienz der durchgeführten Maßnahmen sicherzustellen?

Werden die Ergebnisse aus der Überprüfung und Überwachung gecheckt?

Werden die Ergebnisse aus der Überprüfung und Überwachung genutzt, um das Vorgehen zu verbessern?

Interview 09.07.2020
Oscar Rosner

← INTERVIEWS ABSCHLIESSEN

< 1. Effektivität 1/2 >

Betragsgrössigkeit des Faktors 1. Effektivität

Genaugheit und Vollständigkeit mit den Nutzenzielen und Nutzer spezifische Ziele erreichen.

Notizen des Interviews

Basisfragen

Existiert eine Planung, um das Qualitätskriterium in der Anwendung zu steigern?

Ergebnis Begründung

Verantwortlicher

Dokumentation Bemerkung

Vorgehen Nachweis

Speichern

Werden konkrete Maßnahmen ergriffen, um das Qualitätskriterium in der Anwendung zu steigern?

Run interviews, make notes and persist the given answers

Manage an audit's interviews,
status and contact persons



Angular Frontend

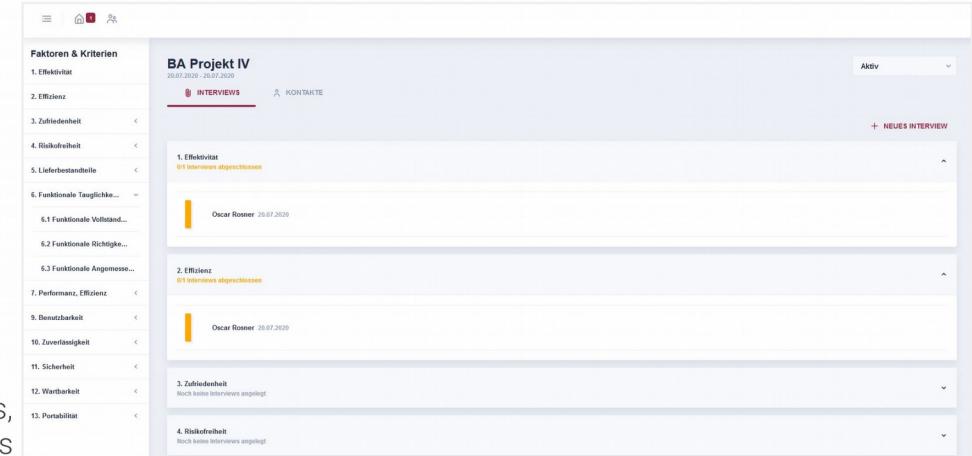


REST AP

Java Spring Backend



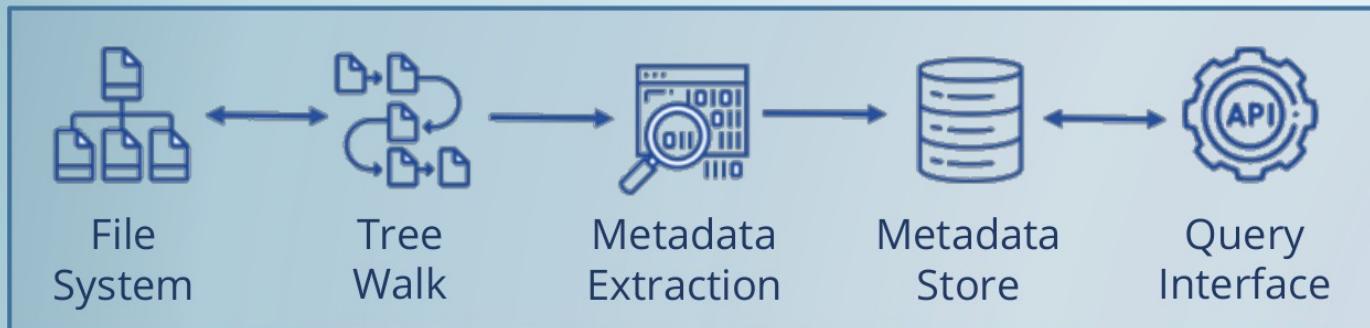
Hibernate ORM



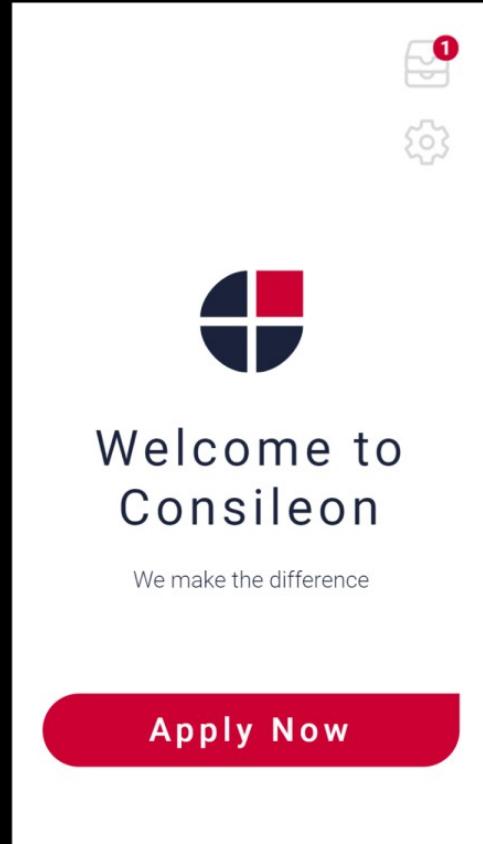
Team 2: Metadata-Hub



Metadata-Hub intelligently crawls large file systems in order to provide a platform-independent retrieval, storage, and query mechanism for metadata, allowing end-user applications to conduct efficient data analyses on large file systems.



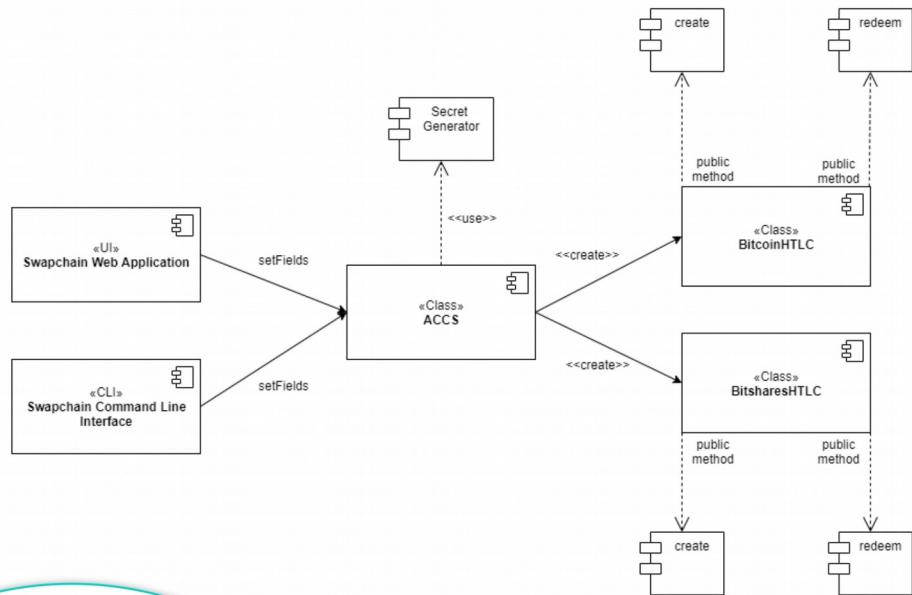
digitact



The future of job fairs



Software Architecture



Our Web-App & CLI

swap chain Trade CLI Orderbook [WIP](#)

Documentation

Cryptocurrency exchange without trust

Swapchain creates a trustless environment for the decentralized exchange of assets using Hashed Time Lock Contracts

[Trade now](#) [Learn more](#)

```
version: sprint-12-release
Welcome to swapchain-cli.

? Are you proposer or accepter? accepter
? On what network do you want to trade? testnet
? Would you like to give BTC or BTS? BTS
? Please enter the priority of the Bitcoin transactions: 0
? Please enter your Bitcoin private key (WIF format): dMfxssR3YgvoyhuW35jeu8Q1YxkBcpVh146CTsCLtGnfhkBxk27
? Please enter your Bitsshares private key (WIF format): 5hTjdr3NXGIRSMnrcemetGDrattJA7caG5jihFmyQLwEMC7fr
? Please enter the Bitsshares public key of the counterparty: 027c921e0b55383e8b4412488c5baf007c3d2421890da895599a4c2f750f5fd911
? Please enter the Bitsshares account name of the counterparty: amos
? Please enter the amount of BTS you want to give: 200
? Please enter the exchange rate in BTS/BTC: 200000
? Please enter the secret hash you received from the proposer: ■
```

Agile Methods and Open Source (AMOS) | swapchain.netlify.app

Industry Partner

Infineon Technologies



- Largest Semiconductor manufacturer in Germany
- 41,400 Employees
- 8.0€ Billion in Revenue (2019)
- Headquarters in Neubiberg, Germany
- Industry Supervision by Walter Nirschl

Project Description

The idea of an automated tagging application originates from the M&A department of Infineon. During the process of an acquisition or sale of a company, a large number of documents is collected, which later on serves as a basis for decisions for potential M&A deals. In order to cope with the large number of documents, tagging is essential for the employees. Therefore, the question of automated tagging was discussed within the company. The goal was to build an application in such a way that basic functionalities, such as manual document tagging, are retained and on top, automated tagging based on machine learning can help to replace time consuming manual tagging.

Use Cases

The user is able to work with various document types like pdf, docx, html, and email, just to name a few.

Various documents can be uploaded from the users file system and downloaded to the users' file system in an easy manner

Keyword Models can easily be exported or imported, e.g. from an existing ERP system to reduce manual effort

A search functionality can be used by the user to find results in the document content as well as the provided metadata on the document overview page

Using the Keyword Model-based tagging solution the user has the possibility to define a hierarchical keyword model with various dimensions and keywords by himself and afterwards apply it to the documents. The documents then only get tagged with tags that the user defined by himself

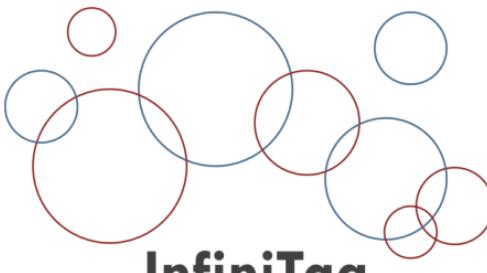
The user has the option to tag single or multiple documents manually or use the automated functionalities of InfiniTag

The landing page provides insightful dashboards, e.g. to understand how many documents or keyword models are currently worked on

Single as well as multiple documents can be selected to apply manual actions on them, like adding or deleting keywords

The AI-approach is the second approach that the user can use to tag the documents. A clustering algorithm then automatically creates and assigns suitable tags to documents

The user is always able to understand what functionality has been used to tag the documents, since the tags are colour-coded. Four colors for four different types of tagging: 1) imported keyword 2) manually tagged 3) tagged using KWM-based tagging 4) tagged using AI-based tagging



Real-Time-Scheduler

a Cloud Foundry based highly efficient and robust Scheduler

The Product

The Real-Time-Scheduler(PTS) solves the problem of prioritizing a large amount of tasks in a small time frame. The key role of the PTS is receiving a vast amount of tasks, evaluating their priorities by considering a large number of properties, and dispatch them to their exact destination.

While being extremely fast and flexible, the PTS also provides a high level of security, persistency, and robustness.

Key feature



Inheritance of attributes



Prioritising between man and machine tasks



Adjustable parallelism degree



Pause and resume



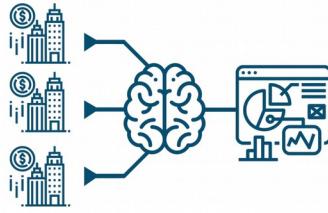
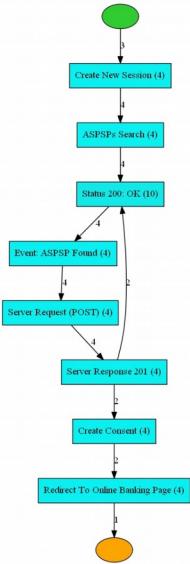
Immediate start of tasks



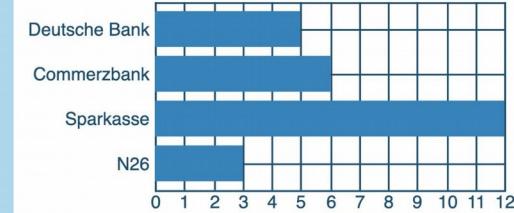
Specify processing time frames

PSD2Miner

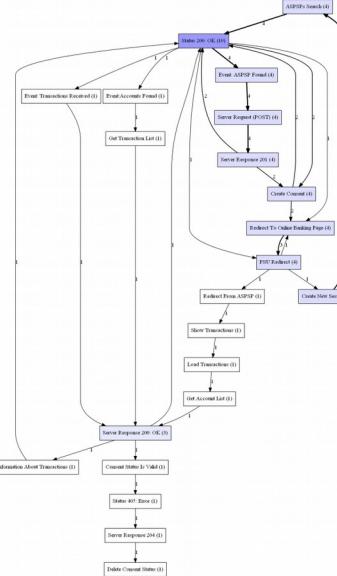
Optimize the workflows of your multi banking gateway



Visualize connections and implications of individual implementations



Analyze how different banks implement the XS2A process



Partners

FAU FRIEDRICH-ALEXANDER
UNIVERSITÄT
ERLANGEN-NÜRNBERG

adorsys

DATEV meets AMOS@FAU

Project 8 Cloud Foundry ® Config

DOMAIN INDEPENDENT OPEN-SOURCE COMMANDLINE TOOL
FOR DECLARATIVE CONFIGURATION OF MICRO SERVICES IN CLOUD FOUNDRY



2020 AMOS Demo Day Agenda and Rooms

10:15 Welcome Address	Riehle	AMOS Demo Day Plenum bit.ly/amos-plenum
10:25 Project Introduction	Teams, Capraro	AMOS Demo Day Plenum bit.ly/amos-plenum
10:40 Virtual Demo I	Teams	Team 1: Audit Tool bit.ly/amos-team1
10:55 Virtual Demo II	Teams	Team 2: Metadata Hub bit.ly/amos-team2
11:10 Virtual Demo III	Teams	Team 3: Student-Job App bit.ly/amos-team3
11:25 Virtual Demo IV	Teams	Team 4: ACCS App bit.ly/amos-team4 Team 5: ML-based Tagging bit.ly/amos-team5 Team 6: Cloud Foundry Scheduler bit.ly/amos-team6 Team 7: Prozess-Mining App bit.ly/amos-team7 Team 8: Cloud Foundry Config bit.ly/amos-team8
11:40 Closing Remarks	Riehle	AMOS Demo Day Plenum bit.ly/amos-plenum
11:45 Open Discussion	Teams, All Interested	Team rooms, see above



Thank you! Questions?

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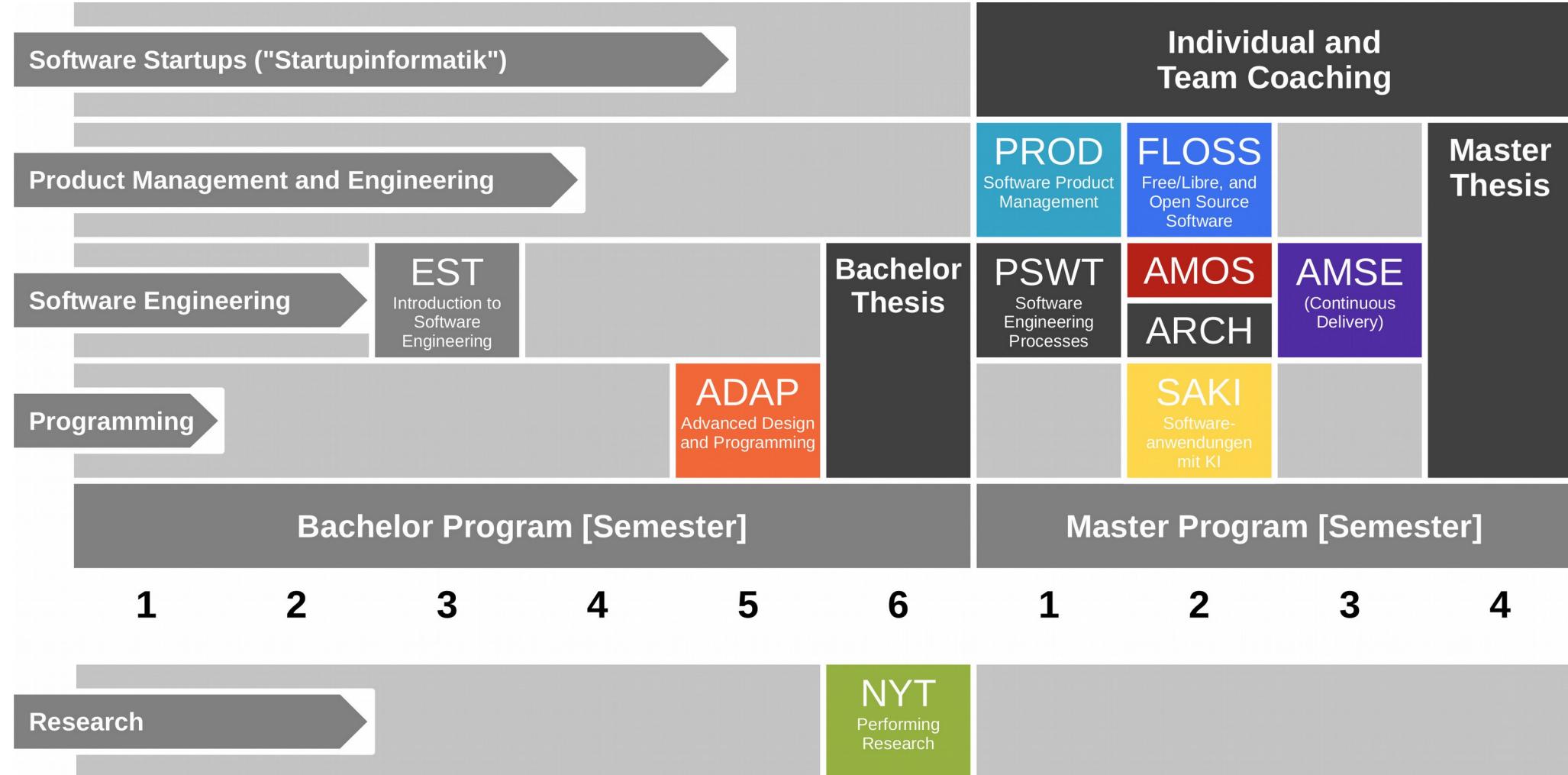
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- Contributions
 - ...

The Professorship for Open Source Software

- Open source strategy and governance
- Inner source software development
- Continuous integration and delivery
- High-quality requirements engineering
- Collaborative knowledge management
- More information at <http://oss.cs.fau.de>

Course Position in Curriculum



EXIT

Reception

Projection

Catering

Junk /
Left Tables

Team 5

Table

Team 1

Seating

Team 7

Team 6

Team 2

Team 3

Team 4

EXIT

EXIT