

Welcome to The AMOS Demo Day!

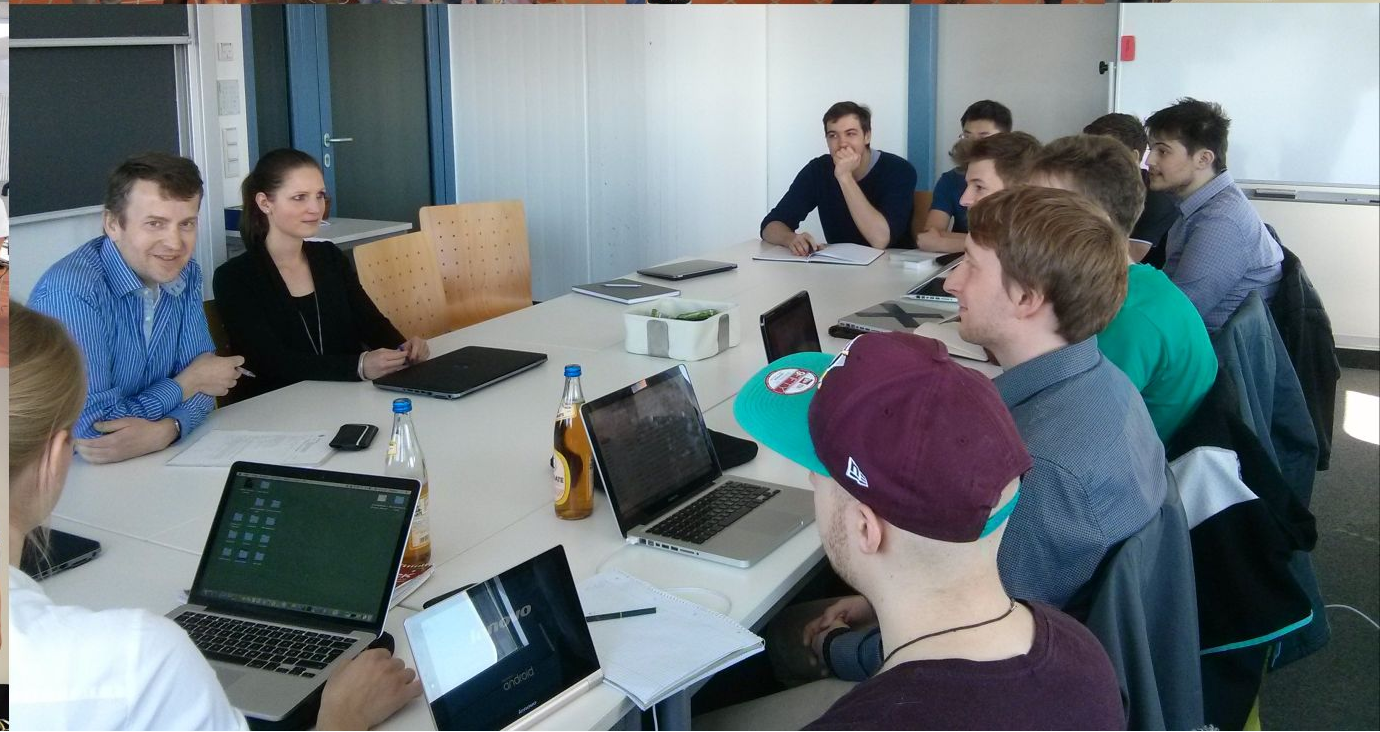
Dirk Riehle, Univ. Erlangen

AMOS C02

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The Professorship of Open Source Software





Industry Partners



ACTANO

adorsys



CONSILEON



GRAU DATA

Hisense



MekTEC

msg

NEWSTORE



Raiffeisen Bank International



SENACOR

SEALSYSTEMS

SICK
Sensor Intelligence.

SIEMENS

SIEMENS
energy

SIEMENS
Healthineers

SOLYP



weber

WSAudiology



Participating Universities



Friedrich-Alexander-Universität
Erlangen-Nürnberg

Technische
Universität
Berlin



Freie Universität

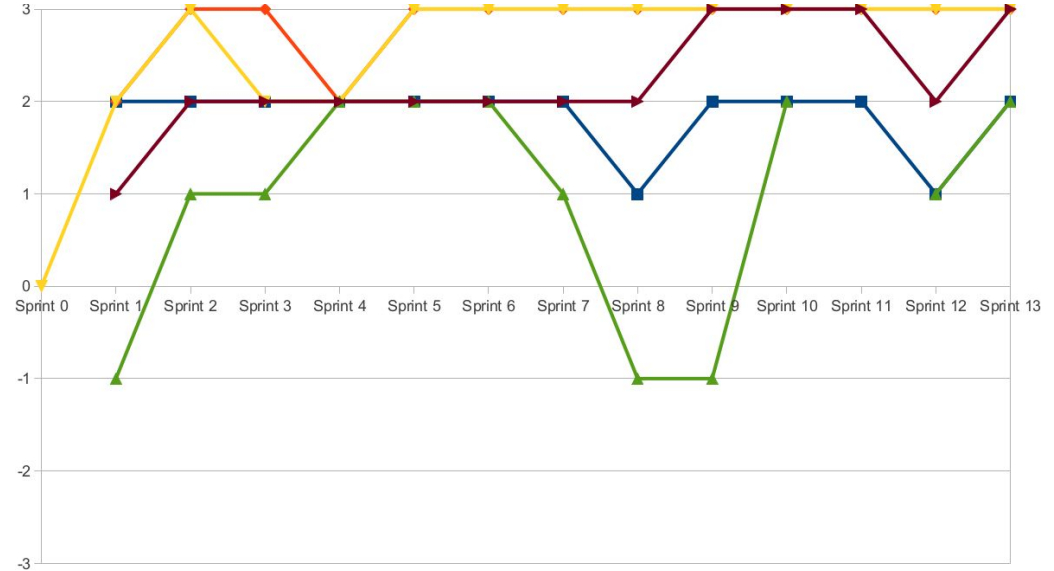


Berlin

Distributed Scrum Teams



Project Coaching and Support



This Semester's Projects

| # | Project | Industry Partner |
|---|---------------------------------|------------------|
| 1 | Xcelerator demo app | Siemens |
| 2 | International dataspace station | DATEV |
| 3 | – | – |
| 4 | Building information enhancer | BUILD.ING |
| 5 | Knowledge graph extractor | HELLA |
| 6 | Health AI framework | Zink |
| 7 | Updating flash boot loader | Hella |
| 8 | Cloud native LLM | Kubermatic |

Xcelerator Demo App

AMOS Project 2024
Team 1 - Siemens



Goals

Develop a water tank management demo application for Siemens Xcelerator.

Monitor water tanks and their devices.

Display tank and device status.

Allow users to issue service cases for water tanks.



Unlock the doors

Currently the doors are locked

Unlock the doors

80%

Eco Score (SiGreen)

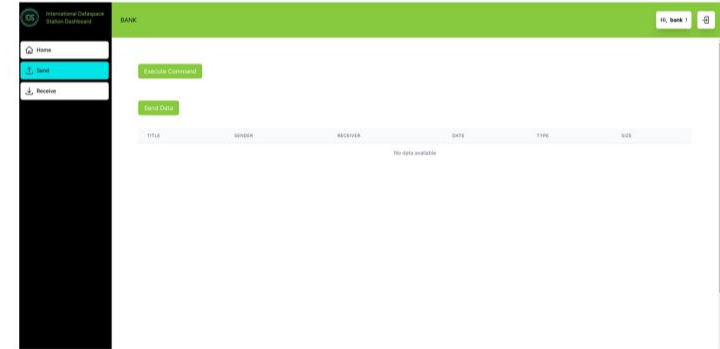
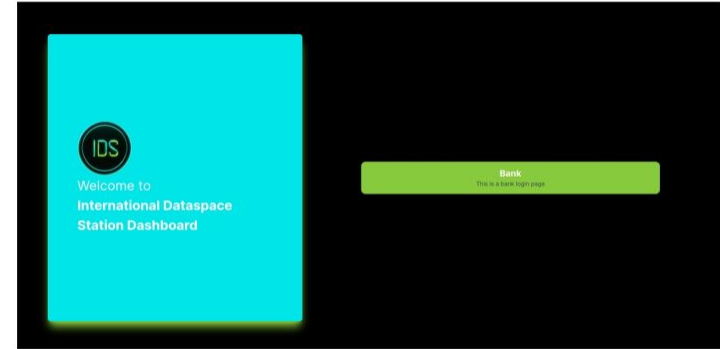
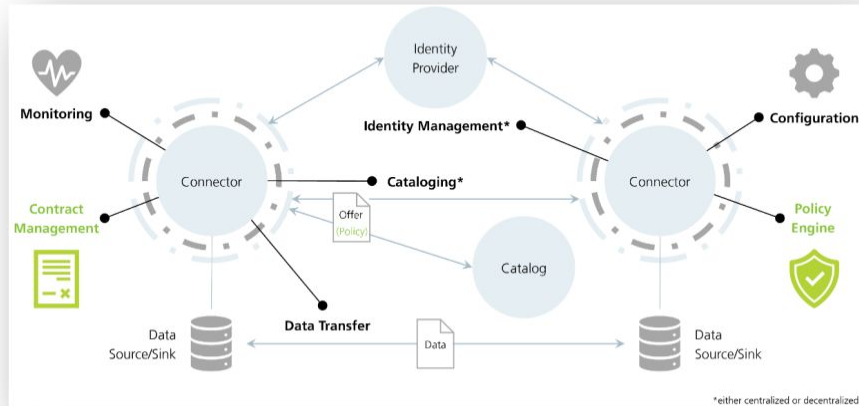
According to SiGreen this facility has an eco score of 80%



International Dataspace Station

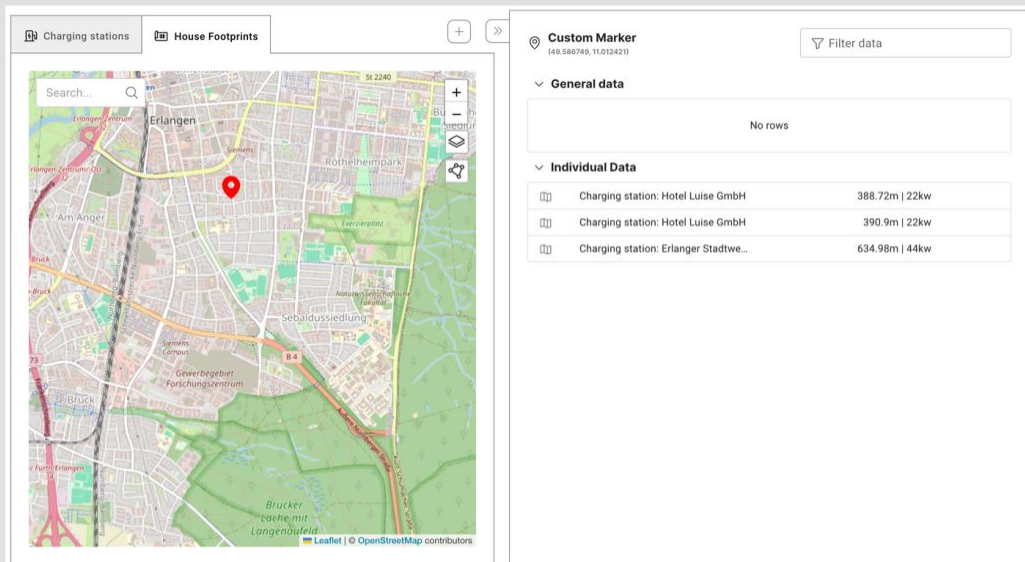
Dataspace is defined as a data ecosystem that integrates multiple infrastructures, policies, governance frameworks enabling data interoperability with trust and compliance.

Our goal is to explore the feasibility of IDS to facilitate a secure, trusted and full control of data exchange.



Problem

Urban planners and developers often struggle to access and analyze comprehensive data, impacting decision-making and sustainability efforts.



Solution

Our solution centralizes diverse data into a single data lake, streamlining access and analysis for enhanced urban planning and sustainability evaluations.



Knowledge Graph Masters

THE AMOS PROJECT
SS24 TEAM 5

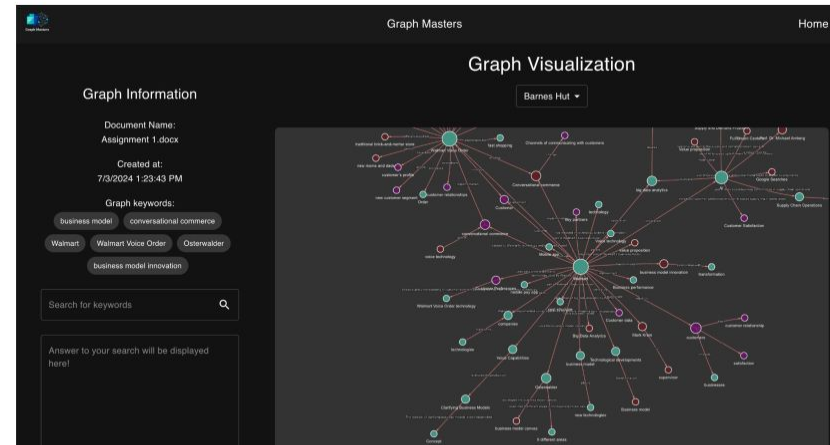


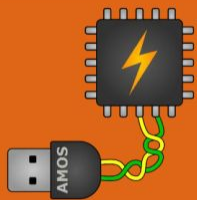
| | |
|-------------------------------------|--------------------------|
| Irene Kuo (PO) | Irem Ozseker (SD) |
| Rebecca Greiner (PO) | Sandeepkumar Ramesh (SD) |
| Yash Bhesaniya (SD) | Hanna Müller (SM) |
| Filipe Alexandre Fabian Borges (SD) | Nikolas Rauscher (SD) |
| Florian Hoffmann (SD) | Kristi Kotini (SD) |

Project Idea

Develop an MVP that generates a knowledge graph from uploaded documents. Users can interactively explore the graph to see clusters of information and how they are linked and utilize a basic search function to navigate and retrieve specific entities within it.

Through generating such knowledge graphs from a corpus of text, information and knowledge is organized in a smarter way that is able to reveal different insights that may not have been noticed before.





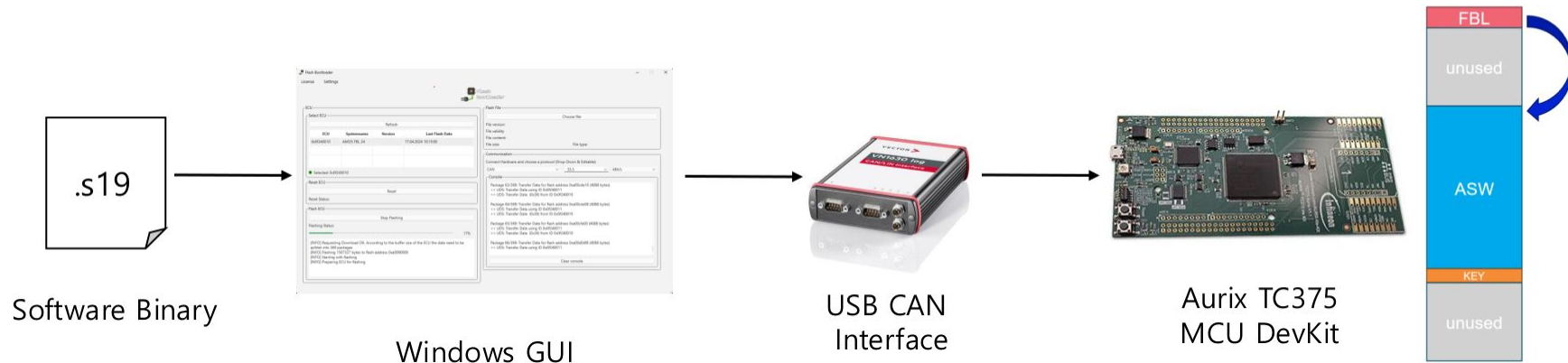
Flash Bootloader

Problem:

Update firmware of ECUs.

Solution:

Bootloader to update software via CAN with an easy to use GUI frontend.





Ailixir

AI-agent generation framework

Zink Ventures x AMOS/SS24/Group 6

About

Proof of concept for a prototyping tool that enables entrepreneurs to deploy customised agents specialised in specific domains. The agents are delivered via a mobile app which is connected to **multiple LLMs** and **specialised context**. The goal is to be able to compare the results generated by different LLMs.

Users

Raj: Entrepreneur-user. Configures and deploys multiple instances of the app for different knowledge domains

Lin: Common-user. Utilises one instance of the app to interact with agents and get lifestyle (mainly nutritional) advice related to her persistent health condition.

Process



Acquire & store **current content** from sources such as websites, podcasts, videos, academic repositories).

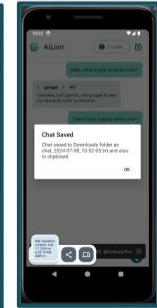
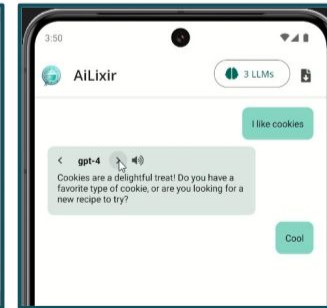


Generate & store **custom context** (embeddings in a vectorstore) utilising **RAG** for model grounding to produce more relevant and **accurate** replies.



Use a **mobile app** to interact with agents via **text** and **voice**.

Results





FAU
FRIEDRICH-ALEXANDER
UNIVERSITÄT
ERLANGEN-NÜRNBERG

Could Native AI Chatbot App

Master Cloud Native Computing with Our Specialized LLM and
Supercharge Your Productivity

Industry Partner
Kubermatic

Developers

Daniel Schäffer, Julio Perez, Anosh Rezaei,
Christian Wielenberg, Yashodhar Pansuriya

Product Owner

Dominic Fischer, Jiaao Li,

Scrum Master

Thorben Wegner



**Deep
CNCF**



Gemma

Demo Day Schedule

| Time | Duration | Responsible | Title | Room |
|-------|----------|-------------|-------------------|------------|
| 10:15 | 10 min | Riehle | Introduction | Main room |
| 10:25 | 10 min | Teams | One slide summary | Main room |
| 10:35 | 20 min | Teams | Demo | Demo rooms |
| 10:55 | 20 min | Teams | Demo | Demo rooms |
| 11:15 | 20 min | Teams | Demo | Demo rooms |
| 11:35 | 20 min | Teams | Demo | Demo rooms |
| 11:55 | 5 min | Riehle | Conclusions | Main room |

Let's go see the demos!

Please join a breakout session



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Thank you! Any questions?

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