

# **Title:** Service models' alignment with an IT system: translation between OpenAPI and an IT system model

**Description:** Today's enterprises use service-oriented architecture (SOA) and services to deliver SaaS to their customer. Specification of what the services do for the customer in a uniformed way is still an open area for explorations. The OpenAPI initiative tries to establish a standard for service description. There is an open question – how to connect these service specifications with the business decisions made, and the overall specification of the IT system that serves the customer.

This project's objective is to create a tool that:

- Transforms an OpenAPI micro-service specification to a behavioral model of an IT system;
- Generates an OpenAPI specification from a behavioral model of an IT system.

## **Prerequisites:**

- Motivation to understand service design and the principles service-oriented architecture
- Knowledge of REST
- Comfortable with at least one programming language

## **Benefits for the students:**

- Learn service standards used in the industry;
- Possible contribution to an open source project (if willing to, not required for the project);
- Learn about service-oriented architecture and service-oriented computing.

**Project type:** Master or semester project

**Responsible:** Blagovesta Kostova ([blagovesta.kostova@epfl.ch](mailto:blagovesta.kostova@epfl.ch))

References:

1. <https://www.openapis.org/>
2. <https://swagger.io/specification/>