Bachelor / Master

Tackling Covid with AI

Motivation

The management of pandemic situations such as caused by Covid or Monkeypox will remain a challenge for the foreseeable future. This thesis makes use of AI to try to support addressing this challenge, while taking privacy and security considerations of patient data into account.

Objectives

This thesis investigates the development of data-driven and AI-based decision support systems in pandemic situations with a focus on data protection and IT security aspects, for example focussing on:

- Privacy and IT security requirements in data-intensive systems and their analysis
- Development of a reference architectures for IT security and data protection and simulation of attack scenarios in data-intensive systems
- Reference development processes for IT security and data protection in data-intensive systems

Prerequisites

Knowledge in software engineering as gained by bachelor level software engineering lectures; interest in addressing current societal challenges.

Literature

- `https://www.coronawarn.app/en/#privacy`
- `https://github.com/corona-warn-app/cwa-documentation/blob/main/solution_architecture.md`
- `https://www.coronawarn.app/en/science/2021-08-02-science-blog-3`
- `https://www.coronawarn.app/assets/documents/cwa-datenschutz-folgenabschaetzung.pdf`

Contact

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