Improving midPoint with AI

Description of the assignment

The central role of Identity Governance & Administration (IGA) in an organization's cybersecurity strategy cannot be overlooked. As organizations navigate complex digital landscapes, the need for a cohesive, identity-focused approach to cybersecurity becomes essential. IS4U is a dedicated partner to guide and support organizations on this journey, ensuring that solid Identity Governance & Administration forms the cornerstone of their cybersecurity strategy.

MidPoint is an open source Identity Governance and Administration (IGA) platform that helps organizations manage identities, roles and access rights. Configuring midpoint can be complex and error-prone, especially in larger environments. AI offers opportunities to analyze, optimize and even automatically generate parts of this configuration.

Goals

The goal of this internship is to investigate how AI can be used to improve midPoint configurations. On the one hand, by providing new configurations based on input or templates, and on the other hand, by analyzing and optimizing existing configurations.

The intern will:

1. Explore AI applications within IGA:
   - Which AI techniques are relevant for configuration-analysis and -generation?
   - Which existing tools or models can be used?
2. Analyze existing midPoint configurations:
   - Detect inconsistencies, redundancy or inefficiencies.
3. Develop an AI-supported configuration generator:
   - Automatically generate configuration proposals based on input (e.g., use cases, policies, roles).
   - Use NLP or machine learning to predict configuration elements.
4. Integration and validation
   - Integration with midPoint test environment.

- Validation of generated or optimized configurations.
5. Documentation and knowledge sharing:
    - Technical documentation of the developed AI component.
    - Presentation of results and demo.

Depending on the progress of the internship assignment and advancing insights, the assignment may be expanded, in agreement.

Project Methodology

ACEN uses agile project methodologies such as pair programming and Scrum for its projects. The project described above is no exception. These methodologies focus on the quality of software solutions. This is achieved by dividing the project into shorter iterations and through very intensive communication within and outside the project team.

Intensive communication is inherent to agile and ensures high-quality internship supervision.

Intensieve communicatie is inherent aan agile en zorgt voor een kwalitatieve stagebegeleiding.

Contact details

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