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# AI 4 Soft. Eng. Soft. Eng. 4 AI



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# Software Engineering Division

Arguably, the **largest SE group** in Europe

20 faculty members

80 MSEK/year external funding

**Artificial intelligence**  
is a major theme

AI  $\Rightarrow$  SE

SE  $\Rightarrow$  AI



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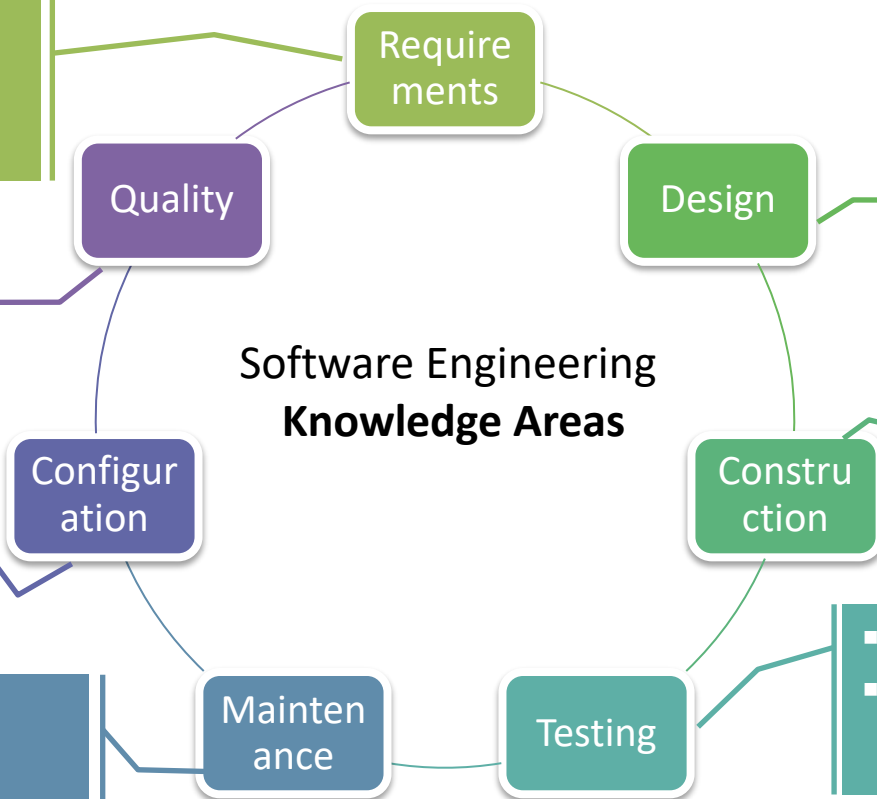
# Smart development techniques

- Ident. knowledgeable stakeholders
- Automatic tracelinks ident.

- Prediction of faults and vulnerabilities
- Smart metrics

- Predict which feature a newly committed code belongs to

- AI to explain software, and vice versa



**Software Engineering  
Knowledge Areas**

- Generative secure design
- Theta architecture
- Decision making

- Predict performance problems @ coding
- Security dojo

- Test suite optimization
- Smart configuration of performance test suites

# Vision and challenges

Software **complexity explosion** (SoS, IoT...)

⇒ **AI-assisted software development** (creativity?)

⇒ AI-tested, -maintained, -operated systems

Expanding interface **software vs humans** (CPS)

⇒ **Ethical aspects** of AI-\*systems