Master thesis ideas
– Health informatics group

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Health informatics

• The area
  – The area of knowledge that deals with information processing and communication in health care, health education and health research
  – Includes methods for defining, collecting, organizing, storing, analyzing and presenting medical, welfare, administrative and economic data in health care

• The research group
  – Always interested in master thesis projects in the area
  – Have several connections to healthcare organizations, companies, authorities and standardization organizations
Decision support system / Artificial intelligence demonstrator

• Demonstrate how future health record integrated decision support systems can work for clinicians in a pedagogic way
• Investigate and select principles and graphical demonstration method(s)
• Implement the principles in a demonstrator (software)
  – Change or load decision support rules and health record content
  – Graphically show how rules and content interact
• Potential methods to use are bayesian networks, fuzzy logic, concept and argument maps, ontologies and clinical information models
Comparison and version control of information models with (post-coordinated) ontology expressions

• The medical knowledge are constantly being developed and expanded
• → The information models and ontologies used in health records needs to be updated
• The health record content might be useful during a patient’s entire life
• → The content needs to be understood and compared independent of which versions of the information models and ontologies that are used for the information
• Investigate common problems with comparability of health record content based on different versions of information models and post-coordinated ontology expressions
• Propose methods to handle the problems
• Create graphical illustrations that visualize and help solve the problems
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