



Bachelor Thesis Opponent Review

Thesis: Software using random forest for risk prediction of heart valve surgery patients

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The presented work has been focused on an early risk factors prediction and classification in the area of cardiac-related diseases. An exceptional added value of the work is the fact that the processed data originate from a Linz hospital and thus represent real-life cases. Therefore the prediction analysis has a factual medical impact and could be used in the prevention of heart valve surgery and other serious cardiac problems. An additional contribution of the work is personal anamnesis assessments based on symptoms observed by individual patients. Thanks to using of the machine learning pipeline, the outcomes of the work can be used for a more precise prediction of heart conditions risks based on a patient's anamnesis, since the assessment has revealed symptoms that may be significant but have not been taken into account so far.

The thesis represents a solid base for consecutive research in the respective domain and I recommended this work to be defended and in case of successful defence to obtain an academic degree "Bachelor of Science (BSc)".

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Ing. Rudolf Vohnout, Ph.D.