



PhD in Computer Science and Mathematics – XXXIV cycle

Big Data Analytics for Process Improvement in Organizational Development

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Abstract: Modern information systems that support complex organizational processes maintain significant amounts (event logs) of process execution data describing the sequence of activities of actors involved in the organizational development of a business process. Process mining techniques have recently gained momentum in the analysis of data extracted from event logs as they provide surprising insights for managers, system developers, auditors and end users. Being able to describe and predict behaviour and organization of a process is an important business capability. In particular, the effectiveness of a managerial decision-making response to variation in the environment may strongly depend on the extent to which it can reduce the impact of uncertainty through prediction and conformance.

Industrial partner



MTM Project srl is an established Italian Innovative SME, specialized in software development (web, desk and mobile), IT consulting and technical training.

Within this PhD research, MTM Project is providing knowledge, documents and data about the contexts addressed by the research and experimentation activities

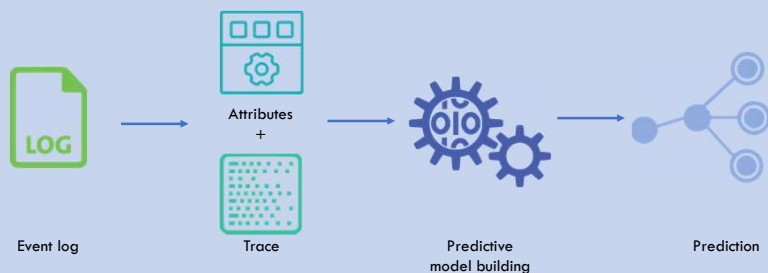
International partner



The PADS Lab at RWTH AACHEN University is a laboratory very active in Process Mining, Business Process Management and Business Process Intelligence.

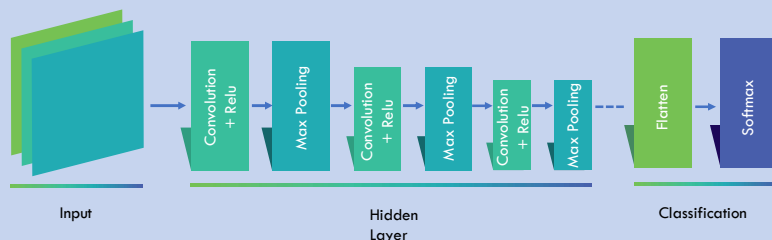
Within the PhD they will provide their expertise about the synthesis of process mining techniques in order to support the organization decision makers in the optimization of productive processes.

Description of Activities



- Deep Learning (CNN, Autoencoder)
- Multi-profile learning

- Process Data Engineering
- Spatial structure
- Temporal structure
- Embedding



Industrial partner supervisor

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