Project Proposal – Critical Analytics

1. Introduction

Mentura Group provides software for critical communication network operators and user organizations like police, ambulances, railways and airports. We have a lot of data about field operations that save lives.

Now we want to find a team to help us and our customers to make better use of that data. The project will build a platform and implement a practical use case on the platform in very interesting domain.

2. Project goals

Project goal is to implement platform to collect and analyse critical network and operational data. Main outcomes are

- Data management platform able to collect and store large volumes of near real time data
- Machine learning AI algorithms able to identify early warnings from the data
- Practical use case based on real world data and integrated to our product API or UI
  - For example: connect network operators call data with unit location reporting data to warn control room operator about assigning single unit to a task in areas with poor network coverage

3. Technologies

- We have considered below technologies for platform
  - ELK stack (Elastic search, Logstash, Kibana)
  - Kafka
- Student group can propose other justified technologies for platform
- Practical use case integrated to Angular UI / web service API
- Support
  - We have tested ELK stack and Kafka, so we are quite confident and can support
  - We can support and help with the integration

4. Requirements for the students

- Java based implementation preferred
- ELK stack and Kafka can be learned during the project
- Moderate difficulty: apply existing platforms and algorithms in new domain

5. Legal Issues

The client gets all IPRs to the results. We may agree to publish the solution under Apache license, but we cannot promise that yet.
 Signing the NDA included in the Aalto's contract template is required. That way we can share information and sample data more freely to you.

No other legal issues.

6. Client

Mentura Group is a Finnish company providing very specialized software products for critical network operators and public safety user organizations. We are located very close to Otaniemi and believe that both we and student group get most benefit by discussing the project regularly on weekly basis.

Mentura will provide data and development environment.

Client representative(s)

- Project Manager
  - Jarno Korhonen
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  - Keilaranta 1, Espoo
  - Experience in AI and software projects
- CTO
  - Andreas Heckwolf
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  - Keilaranta 1, Espoo
  - Experience in Kafka, databases and Java

Preselected Student Team Members

- None

7. Additional information

- Documentation and working language: English