

UNIVERSITY OF TARTU
Institute of Computer Science
Computer Science Curriculum

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**Automation of Generating Suspicious
Transaction Reports to Singapore's Financial
Intelligence Unit: the Use-case of FinTech
Company**

Bachelor's Thesis (9 ECTS)

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MSc Nikita Kuznietsov

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Automation of Generating Suspicious Transaction Reports to Singapore's Financial Intelligence Unit: the Use-case of FinTech Company

Abstract:

Regulatory reporting is an increasingly important topic in the financial domain as a critical means to ensure transparency, accountability, and compliance with legal and ethical standards. This thesis describes the development of a prototype solution for the automation of filling suspicious transaction reports (STRs) to Singapore's Financial Intelligence Unit (FIU). The study examines the current process and time costs of filling STRs, and describes a solution, which gathers data from the company's internal microservices and transforms them appropriately to automate filling of the most repetitive parts in the STR. The developed prototype is tested with multiple reportable users, and the results show that when deployed it will reduce the time spent on the STR by half, whereas by improving the transaction data collection the time spent can be further reduced up to 75%. Apart of solution developed and expected to be deployed in May 2023, this thesis contributes to the field of FinTech by providing a practical solution for automating the filling of STRs to the FIU, reducing the burden on compliance officers, reducing human-errors, and improving the effectiveness of anti-money laundering efforts.

Keywords:

Automation, Fraud detection, AML, Suspicious transaction, Financial intelligence, FinTech, Regulation

CERCS: T120 (Systems engineering, computer technology)

Kahtlaste tehingute aruannete genereerimise automatiseerimine Singapuri

Rahapesu Andmebüroole: Näide läbi FinTech firma

Lühikokkuvõte:

Regulatsioonist tulevate aruannete esitamine on finantsvaldkonnas üha olulisem teema, kuna see on oluline vahend läbipaistvuse, vastutuse ning seaduslike ja eetiliste standardite järgimise tagamiseks. Käesolev töö kirjeldab prototüübi väljatöötamist kahtlustatavate tehingute aruande (STR-i) täitmise automatiseerimiseks Singapuri finantsluure üksusele (FIU-le). Uurimus analüüsib hetkese STRi täitmise protsessi ja ajakulusid ning kirjeldab lahendust, mis kogub ettevõtte sisestelt mikroteenustelt andmeid ja transformeerib need

vastavalt, et automatiseerida STR-i kõige rohkem korduvate osade täitmist. Arendatud prototüüpi testitakse mitme raporteeritavate kasutajaga ning tulemused näitavad, et kasutuselevõtul see vähendab STR-i täitmisele kuluvat aega poole võrra ning tehingute andmete kogumise protsessi täiendamisel võib seda aega vähendada kuni 75%. Lisaks väljatöötatud lahendusele, mis kavatakse kasutusele võtta 2023. aasta maikuus, aitab see lõputöö FinTechi valdkonda, pakkudes praktilist lahendust STR-i täitmise automatiseerimiseks FIU-le, vähendades töötajate koormust, inimlikke vigu ning parandades rahapesuvastase võitluse tõhusust.

Võtmesõnad:

Automatiseerimine, Petturluse tuvastamine, Rahapesuvastane, Kahtlustäratav tehing, Finantsluure

CERCS: T120 (Süsteemitehnoloogia, arvutitehnoloogia)

Appendix

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