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## Master Thesis Supervision at Aalto Univerity

1. J. Naveed, *Code Generation in Building Information Modeling (BIM) Applications using Retrieval-Augmented Generation with Large Language Models*, ongoing.
2. P. Dang, *Personalized Clustered Federated Learning*, ongoing.
3. R. Kausiala, *Predicting retail investor fund flow using machine learning*, ongoing.
4. A. Sarkima, *Log based anomaly detection in 5G L3 deployment unit using GNNs*, ongoing.
5. O. Lauronen, *AI tool for a company's internal support ticket system*, industry: Polygon Oy, ongoing.
6. Q. Diem Luong, *Proof of Concept for FedRelax on Kubernetes*, ongoing.
7. V. Toivonen, *Determining User Preference Profiles from Email And User Engagement Data*, industry: Vibemetrics Oy, ongoing. 
8. M. Hilvo, *The effect of privacy enhancing technologies on the quality of predictive models in healthcare*, industry: VTT, Oct. 2024. 
9. A. Raghavendra Bhat, *Classifying Scam E-Commerce Shops with Supervised Learning*, industry: F-Secure, Oct. 2024. 
10. A. Rodimov, *Security system based on object tracking by video stream*, Aug. 2024. <https://urn.fi/URN:NBN:fi:aalto-202408265859>
11. A. Shuianova, *Kinship verification between two people by photos*, Aug. 2024. <https://urn.fi/URN:NBN:fi:aalto-202408265860>
12. J. Rantanen, *Large Language Models in Mental Health Support*, July 2024. <https://urn.fi/URN:NBN:fi:aalto-202408255774>
13. R. Mård, *Backdoor attacks on large transformer-based regression model*, July 2024. <https://urn.fi/URN:NBN:fi:aalto-202408255769>
14. A. Ghazal, *Zero-shot Machine Unlearning using GANs*, industry: Nokia, July 2024. <https://urn.fi/URN:NBN:fi:aalto-202406305007> 
15. K. Nguyen, *Image Similarity Assessment for Product Quality Assurance*, July 2024. <https://urn.fi/URN:NBN:fi:aalto-202408255659>.

16. D. Suman, *Deep Learning Methods for Demand Time Series Forecasting*, industry: Zalando, June 2024. <https://urn.fi/URN:NBN:fi:aalto-202406234851> 
17. A. Manninen, *Spatiotemporal Traffic Accident Prediction Using Deep Learning Models*, May 2024. <https://urn.fi/URN:NBN:fi:aalto-202406234904>
18. S. Hirvonen, *Comparison of data-driven models for building energy load forecasting*, industry: VTT, May 2024. <https://urn.fi/URN:NBN:fi:aalto-202405263697> 
19. L. Ban, *Neural Motif Counting in Uncertain Graphs*, May 2024. <https://urn.fi/URN:NBN:fi:aalto-202405263699>
20. R. Virtanen, *Explainable AI Techniques in Trustworthy Object Detection*, industry: TietoEVERY Oyj, May 2024. <https://urn.fi/URN:NBN:fi:aalto-202405263770>. 
21. T. Kulokoski, *How well can Machine Learning teach Humans about Machine Learning?*, Mar. 2024. <https://urn.fi/URN:NBN:fi:aalto-202403172727>.
22. S. Facchini, *Predicting Fuel Usage in Airline Industry*, industry: Finnair, Mar. 2024. <https://urn.fi/URN:NBN:fi:aalto-202403172740> 
23. L. Veneranta, *Optimization of Web Page Advertisements using Contextual Bandits*, industry: Sanoma Media, Jan. 2024. <https://urn.fi/URN:NBN:fi:aalto-202401282006> 
24. J. Li, *Empirical Emissions Modeling using Machine Learning*, industry: aurobay.com, Jan. 2024. <https://urn.fi/URN:NBN:fi:aalto-202401281970> 
25. K. Izadi Garmaseh, *Frequency Offset Estimation Using Deep Learning*, industry: Nokia, Jan. 2024. <https://urn.fi/URN:NBN:fi:aalto-202401282059> 
26. S. Chowdhury, *Safety-focused multi-object detection and tracking in industrial settings leveraging private 5G-network technology*, Jan. 2024. industry: TietoEVERY Oyj. <https://urn.fi/URN:NBN:fi:aalto-202401282114> 
27. T. Kontola, *Predicting User Web Behaviour with Machine Learning Methods*, industry: Columbia Road Oy, Jan. 2024. <https://urn.fi/URN:NBN:fi:aalto-202401282008> 
28. R. Siljander, *Extreme gradient boosting methods for covariate forecasting of housing market demand in Finnish postal code areas*, industry: Alma Talent Oy, Dec. 2023. <https://urn.fi/URN:NBN:fi:aalto-202312187385> 
29. J. Jäkärä, *From Candles to Ticks - Improving financial backtesting accuracy*, industry: Aekos Trading Oy, Dec. 2023. <https://urn.fi/URN:NBN:fi:aalto-202312187389> 

30. X. Landa Oregi, *MLOps data ingestion pipeline for reciprocal benefit between customer and provider*, industry: Huawei, Nov. 2023. <https://urn.fi/URN:NBN:fi:aalto-202401071333>



31. T. Brumani, *Microservices-Based Anomaly Detection for Mobile Network Observability*, industry: Ericsson Finland, Sept. 2023. <https://aaltodoc.aalto.fi/items/747916fb-98a1-4195-93a6-841cf0b6be71>



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32. G. Rivi, *Software Defined Networking Controlled Energy Optimization through Traffic Prediction on Microwave Access Network*, industry: Ericsson Finland, Sept. 2023. <https://aaltodoc.aalto.fi/items/f3545faf-7aec-4453-b123-6be572a0ac80>



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34. Z. Liu, *Deep Learning based method for Fire Detection*, industry: Detectium, Sept. 2023. <https://aaltodoc.aalto.fi/items/e721634e-004a-4a29-b018-1d41a17d33e8>



35. M. Bogdanova, *Contextual bandits to improve staffing in consulting companies*, industry: available on request, Sept. 2023. <https://aaltodoc.aalto.fi/items/041f9210-3920-43fa-b4b7-dda5de9079f7>

36. Y. SarcheshmehPour, *Application of Reinforcement Learning in Electrical Machine Design*, industry: ABB Oy, Aug. 2023. <https://aaltodoc.aalto.fi/handle/123456789/122863>



37. L. G. Tejada, *Applying Machine Learning to Forecast Formula 1 Race Outcomes*, Aug. 2023. <https://aaltodoc.aalto.fi/handle/123456789/122937>

38. C. Segercrantz, *Experimental evaluation of record linkage algorithms in a secure banking environment*, industry: Nordea Bank Oyj, Aug. 2023. <https://aaltodoc.aalto.fi/handle/123456789/123205>



39. H. Wang, *Material Capture and Generative Rendering with Phenomenological Reflectance Models*, industry: Huawei, Aug. 2023. <https://aaltodoc.aalto.fi/handle/123456789/122900>



40. G. Jiang, *Parallel Training of Neural Networks in 6G L1*, industry: Nokia Oy, Aug. 2023. <https://aaltodoc.aalto.fi/handle/123456789/122835>



41. K. Lasocki, *Deep Learning for generating continuous melodies conditioned on lyrics and initial melodies*, Aug. 2023. [https://www.finna.fi/Record/aaltodoc.123456789\\_122794](https://www.finna.fi/Record/aaltodoc.123456789_122794)



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42. T. Vanhala, *Data-driven xVA exposure calculation for a portfolio of interest rate swaps*, industry: Nordea Markets, May 2023. <https://aaltodoc.aalto.fi/handle/123456789/120932>




43. A. Agisheva, *Reviewer Ethics in Machine Learning Research*, May 2023. <https://aaltodoc.aalto.fi/handle/123456789/120999>

44. R. Tikkanen, *Machine learning for Fitness Tracker Data Integration*, industry: <https://fjuul.com/>, May 2023.



45. T. Hung Vu, *Deep learning-based Mammography Image Segmentation*, Mar. 2023. <https://aaltodoc.aalto.fi/handle/123456789/120211> 

46. S. Johansson, *Classification of Purchase Invoices to Analytic Accounts with Machine Learning*, Jan. 2023. <https://aaltodoc.aalto.fi/handle/123456789/119486> 

47. T. Sormunen, *Pallet Detection in Warehouse Environment*, industry: <https://www.wartsila.com/>, Jan. 2023. <https://aaltodoc.aalto.fi/handle/123456789/119397>



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48. J. Himanen, *Towards a data-driven circular economy: predicting material streams in the construction industry*, Jan. 2023. <https://aaltodoc.aalto.fi/handle/123456789/119342>



49. T. Rahman, *Intrusion Detection system based on Deep Learning*, Aug. 2022. <https://aaltodoc.aalto.fi/handle/123456789/116391>




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50. T. Gyabaah, *Artificial intelligence to support NFTs creation: Comparison of Machine learning algorithms to detect fraud in artwork*, industry: <https://www.blankt.com/>, Jul. 2022. <https://aaltodoc.aalto.fi/handle/123456789/116504>



51. J. Lillfors, *Networked Federated Learning*, Jul. 2022. <https://aaltodoc.aalto.fi/handle/123456789/116275>

52. A. C. Barcsa-Szabo, *Feature-based Approaches for Ethical News Personalization*, industry: Sanoma Media Finland (<https://media.sanoma.fi/>), Jul. 2022. <https://aaltodoc.aalto.fi/handle/123456789/116478> 
53. C. Molinero Ranera, *Multi-label classification of a hydraulic system using Machine Learning*, Jul. 2022. <https://aaltodoc.aalto.fi/handle/123456789/116308>
54. V. Petrutiu, *Exploring Transformers and Degradation Methods in the Super Resolution Field*, industry: Huawei, Jul. 2022. <https://aaltodoc.aalto.fi/handle/123456789/118298>



55. P. Truong, *Crown-of-Thorns Starfish detection by state-of-the-art YOLOv5*, Jul. 2022. <https://aaltodoc.aalto.fi/handle/123456789/116281>
56. Y. Huang, *Text analysis of novel coronavirus pneumonia based on federal deep learning*, June 2022. <https://aaltodoc.aalto.fi/handle/123456789/115546>
57. C. Ozen, *A collaborative approach for large-scale Electricity consumption using Federated Learning*, June 2022. <https://aaltodoc.aalto.fi/handle/123456789/115282>
58. P. Prinsen, *Robust Gas pressure control using Neural Networks*, industry: Wärtsilä Finland Oy, Jan. 2022. <https://aaltodoc.aalto.fi/handle/123456789/112627>



59. E. Hattula, *Transfer Learning Technology for Building Extraction from Orthophotos and Open-Source Data*, industry: National Land Survey of Finland (<https://www.maanmittauslaitos.fi/en>), Jan. 2022. <https://aaltodoc.aalto.fi/handle/123456789/112450>



60. A. Channabasaiah, *Applying machine learning methods to predict taxi pickups using historical taxi data*, Jan. 2022. <https://aaltodoc.aalto.fi/handle/123456789/112871>
61. R. Hellström, *Aspect Based Sentiment Analysis in Finnish*, industry: Crowst Oy, Jan. 2022. <https://aaltodoc.aalto.fi/handle/123456789/112857>



62. M. Leinonen, *Federated Multi-task Learning over Networked Data*, June 2021. <https://aaltodoc.aalto.fi/handle/123456789/108261>
63. M. Uutaniemi, *Extraction of labeled fields from images of structured documents*, Aug. 2021. <https://aaltodoc.aalto.fi/handle/123456789/109305>
64. A. Orre, *Pedestrian movement analysis from drone perspective*, Dec. 2021. <https://aaltodoc.aalto.fi/handle/123456789/111730>
65. P. Vijayakrishnan, *Semi-supervised machine learning techniques for infant motility classification*, Oct. 2021. <https://aaltodoc.aalto.fi/handle/123456789/110565>
66. J. Seppälä, *Application of machine learning to link click predictions in Facebook Family of Apps advertising*, 2021. <https://aaltodoc.aalto.fi/handle/123456789/106829>

67. K. Kutlu, *Machine Learning based Chaos Engineering for Cloud-Native Microservice Architectures*, industry: Ericsson, Aug., 2021. <https://aaltodoc.aalto.fi/handle/123456789/109355>



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68. K. Ariko, *Increasing the safety in the proximity of the mobile working machines: a study of detecting people*, industry: Epec Oy, Oct. 2021. <https://aaltodoc.aalto.fi/handle/123456789/110498>



69. M. Afteniy, *Predicting time series with Transformer*, May, 2021. <https://aaltodoc.aalto.fi/handle/123456789/107662>

70. Z. Mohammadi, *Better Utilization of Relational Data in Machine Learning*, industry: Lamia Oy, May, 2021. <https://aaltodoc.aalto.fi/handle/123456789/107604>



71. T. Nguyen, *Applying Machine Learning to Develop Black-box Control Model of Active Double-Skin Facade*, Aalto U., Jan., 2021. co-supervised with Prof. H. Ihasalo, <https://aaltodoc.aalto.fi/handle/123456789/102547>

72. P. Pyrrö, *AIR: Aerial Inspection RetinaNet for Land Search and Rescue Missions*, industry: Accenture, Jan., 2021, <https://aaltodoc.aalto.fi/handle/123456789/112856>



73. T. Kokkonen, *Classifying Restaurant Menu Items With Supervised Learning*, Jan. 2021. <https://aaltodoc.aalto.fi/handle/123456789/102433>

74. C. Dikmen, *Application of Contextual Bandits Models in a Supervised Learning Setting*, Aug. 2020. <https://aaltodoc.aalto.fi/handle/123456789/46314>



75. J. Laiho, *Recognizing Thoughts from Bioelectric Patterns? A Brain-Computer Interface with Deep Learning*, industry: Accenture Liquid Studio (NL), Aalto U., Aug., 2020. <https://aaltodoc.aalto.fi/handle/123456789/46105>



76. X. Zhang, *Diagnostic and Prognostic Analysis Optimization of Field Problems for EV Charging Stations*, industry: ABB, Aug., 2020. <https://aaltodoc.aalto.fi/handle/123456789/46045>



77. T. Hämäläinen, *Clustering IoT devices for network intrusion detection systems*, industry: Ericsson, May, 2020. <https://aaltodoc.aalto.fi/handle/123456789/44266>




















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78. T. Valentijn, *The Practical Applicability of a CNN for Automated Building Damage Assessment*, industry: Red Cross NL (<https://www.510.global/>), June, 2020. co-supervised with Dr. Jorma Laaksonen, <https://aaltodoc.aalto.fi/handle/123456789/44991>





79. J. Nieminen, *Framework for application of machine learning algorithms in telecommunications*, Nokia Oy, Mar. 2020. <https://aaltodoc.aalto.fi/handle/123456789/43572> 
80. M. Mishin, *Anomaly Detection Algorithms and Techniques for Network Intrusion Detection Systems*, Ericsson, Aug. 2020. <https://aaltodoc.aalto.fi/handle/123456789/46076>   
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81. D. Tokmurzina, *Road marking condition monitoring and classification using deep learning for city of Helsinki*, Oct. 2020. <https://aaltodoc.aalto.fi/handle/123456789/47388>  

82. I. Vikström, *Deep reinforcement learning approach for HVAC control*, industry: TietoEVRY Oy, Dec. 2020. <https://aaltodoc.aalto.fi/handle/123456789/97613> 
83. K. Klemets, *Forecasting Hourly Parking Occupancy with Multiple Seasonalities*, industry: City of Helsinki, Aug. 2020. <https://aaltodoc.aalto.fi/handle/123456789/45990>  

84. J. Moisala, *Optimizing the mark-up of foreign exchange derivative contracts using machine learning*, May 2020. <https://aaltodoc.aalto.fi/handle/123456789/44353>
85. L. Kolehmainen, *A web scraping system for extracting news articles*, Vainu Finland Oy, Dec. 2019. <https://aaltodoc.aalto.fi/handle/123456789/41693> 
86. T. Wiro, *Market influence on purchase prices in procurement*, industry: Sievo, June, 2019. <https://aaltodoc.aalto.fi/handle/123456789/39059> 
87. J. Eskonen, *Deep Reinforcement Learning in Automated User Interface Testing*, Ericsson, May, 2019. <https://aaltodoc.aalto.fi/handle/123456789/37895>   
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88. A. Moskalev, *Demand forecasting for fast-moving products in grocery retail*, Relex, May, 2019, <https://aaltodoc.aalto.fi/handle/123456789/37915> 
89. D. Baad, *Automatic Job Skill Taxonomy Generation For Recruitment Systems*, VXT Research Oy, June, 2019. <https://aaltodoc.aalto.fi/handle/123456789/38986> 
90. K. Karapetyan, *Process Mining of Automation Services with Long Short-Term Memory Neural Networks*, industry: Posti Group Oy, March, 2019. <https://aaltodoc.aalto.fi/handle/123456789/37178> 
91. J. Kahles, *Applying Machine Learning to Root Cause Analysis in Agile CI/CD Software Testing Environments*, industry: Ericsson, Jan. 2019. <https://aaltodoc.aalto.fi/handle/123456789/36347>   
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92. H. Ambos, *Semi-Supervised Learning over Complex Networks*, Mar. 2019. <https://aaltodoc.aalto.fi/handle/123456789/37130>

93. M. Torres Porta, *Anti-Money Laundering system based on customer behavior*, Aug. 2019. <https://aaltodoc.aalto.fi/handle/123456789/39938>  
94. A. Shehata, *Cellular Network Average User Throughput-Downlink Prediction by Machine Learning*, Nokia, Dec. 2018. <https://aaltodoc.aalto.fi/handle/123456789/35471> 
95. O. Abramenko, *Graph signal sampling via reinforcement learning*, Nov. 2018. <https://aaltodoc.aalto.fi/handle/123456789/34750>
96. M.O. Nasir, *Supervised Learning in Lighting Control Systems*, Oct. 2018. <https://aaltodoc.aalto.fi/handle/123456789/34394>
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98. N. Pokhrel, *Drone Obstacle Avoidance and Navigation Using Artificial Intelligence*, industry: Nokia, May 2018. <https://aaltodoc.aalto.fi/handle/123456789/31561> 
99. D. Koskeniemi, *Do financial networks improve the explanatory power of the Fama-French factors? A comparison of propagation algorithms on stock market returns*, Mar. 2018. <https://aaltodoc.aalto.fi/handle/123456789/30542>
100. S.B. Jahromi, *Compressed Sensing for Big Data Over Complex Networks*, Jan. 2018. <https://aaltodoc.aalto.fi/handle/123456789/29671>
101. A. Mara, *A Comparative Analysis of Graph Signal Recovery Methods for Big Data Networks*, Oct. 2017. <https://aaltodoc.aalto.fi/handle/123456789/28567>
102. Y. Gao, *Graphical Model Selection in Big Data Application*, Dec. 2016. <https://aaltodoc.aalto.fi/handle/123456789/23908>

## Master Thesis Supervision at TU Vienna

1. B. Kausl, *Channel aware inference based on the Fisher information*, TU Vienna, 2012. co-supervised with Prof. Franz Hlawatsch., <http://hdl.handle.net/20.500.12708/8885>