30.8.2022



## Reference letter

I am writing this reference letter to document Vilhelm Suksi's. remarkable performance during his stay in my group at University of Turku, to serve in developing his professional career.

Vilhelm Suksi contacted me in December 2021 with a request to visit me at Department of Mathematics and Statistics of the University of Turku, for his "Lab rotation in research groups", part of his Master studies in biochemistry at Åbo Akademi University. He joined my Computational Biomodeling Laboratory during the spring semester 2022.

The learning objectives we set for Vilhelm for his lab rotation were for him to learn machine learning for classification problems, and to apply them on a dataset researched in my lab. His background was on biochemistry, with some exposure to mathematics, statistics, AI, and coding.

Without any exaggeration, Vilhelm's development was explosive. In the short time he was with us he became fluent on classification with deep learning and with random forests. He joint our weekly research seminars and on many occasions contributed essential insights into the analysis of the data. The dataset was on spectroscopy of brain tumor samples, and the goal was to separate the cancerous parts from those samples. Vilhelm participated actively and contributed to the work we did on training classification models for this dataset, and on interpreting the data and the results.

I was very impressed with Vilhelm's learning abilities, with his scientific curiosity, and with his thorough work. I thought that his abilities of independent research work, and his scientific maturity are on par with those normally found in PhD students. We also followed up after his lab stay with some deep discussions on the nature of modeling in biology, its challenges and promises in biomedical research. I have no doubt Vilhelm Suksi will develop his professional career further and it will be exciting to follow his path forward in any direction he may choose to take it.

Sincerely yours,

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