



Toni Kuronen
D.Sc. (Tech)
Department of Computational Engineering
LUT University
Yliopistonkatu 34
FI-53850 Lappeenranta
Finland

February 2, 2021

Dear Sir/Madam,

My name is Dr. Toni Kuronen and I am an D.Sc. (Tech) at LUT University in the Department of Computational Engineering. I have been teaching at this university for 4 years in the areas of computer vision and pattern recognition.

I have known Dmitrii Shumilin for 4 months. Dmitrii has completed pattern recognition and machine learning course and excelled with a grade of 5 out of 5. He ranked first out of 40 in the practical assignment evaluation.

He had a good understanding of the challenging material which draws from computer science, machine learning and pattern recognition. His final project demonstrated all of the learning outcomes in pattern recognition and machine learning course:

- Be able to design, build, and test a 3D digit classifier
- Write a documentation for the experiments performed

This project required them to *implement and plan a 3D digit classifier to recognize hand-written digits which were "written" as free-hand strokes in the air with the index finger and the motions were recorded with LeapMotion sensor*. The project was well thought out, well implemented, and properly documented in a presentation and technical report.

He demonstrated good Python and Jupyter notebook skills during the pattern recognition and machine learning course.

To summarize, I would recommend Dmitrii for positions in computer vision and pattern recognition field. He has demonstrated effective work in this field, including: Python, Jupyter, development, prototyping, version control, and documentation in \LaTeX .

If you have further questions, I can be contacted at +358 50 3030 014, toni.kuronen@lut.fi, skype at **tokurone**.