SUMMARY

This thesis discusses the topic of randomness in the context of interactive projection-based installation in public space. The artwork stems from a feeling of appreciation. The people that surround us, the places we hold close to our hearts – what is the probability of everything turning out this way? The aim is to value community by bringing the importance of human relationships and real encounters into focus.

In the theoretical part, I delve more deeply into the theme of randomness. Firstly, I bring out some of the ideas of great philosophers, focusing on those who thought outside the box of determinism. Secondly, I explain what kind of mathematical mechanisms have been invented to rationalize randomness. Probability and stochastic processes are used to predict uncertain events and model complicated systems such as turbulence, changes of weather, brain functions, living organisms, ecosystem, economy, society, the evolution of populations, stock market, and so on. Thirdly, I introduce the phenomenon of emergence – order appearing in big chaotic collectives through self-organization. The classic example is an ant colony, but the same principles can be observed when looking at cities and other natural occurrences. It is also tightly related to pattern formation, a concept studied and further developed by Alan Turing in the 1950s. Lastly, I show how randomness is generated in computer graphics using deterministic noise functions.

In the practical part, I start by explaining the concept of the installation. This is followed by an overview of the basic functionalities and working principles of TouchDesigner, the program I used for creating the visuals. After that, I describe the composition of the artwork. Each of the four segments has an element of randomness in it, either through the application of noise functions, sound vibrations, or interactivity. Moreover, the visual was partly generated and controlled in real time. Lastly, I give the details about the technical setup of the installation. It was shown on the rooftop of Aparaaditehas on the 10th of April 2026 from 21.00 - 23.00. For the projection, a 20 000-lumen Epson PU2220B 20k laser projector was used, and for the spatial sound composed by Tõnis Kristian Koppel, four speakers (one for each channel) were placed in the corners of the terrace.

The thesis concludes with a chapter about the importance of interactive art in public space. It highlights how this type of intervention connects people more deeply with their surrounding environment and strengthens the sense of community by guiding participants from passive observation toward active cooperation.