Generation of random realistic maps is a highly desirable content creation method for entertainment industry. Neural networks provide powerful computational capabilities proven useful in many fields. This thesis describes an algorithm that adapts real-world data to train Recurrent Neural Networks (RNNs) inspired by the pixel RNNs. An algorithm is constructed to generate a map of altitudes, roads, rivers and buildings. The results are tested and evaluated on multiple selected real-world regions. It shows the ability of RNNs to learn and create random realistic maps. Algorithm generates realistic altitude maps reflecting user input and training dataset. The creation of roads and rivers was met with weaker results. The creation of buildings was met with unsatisfactory results.