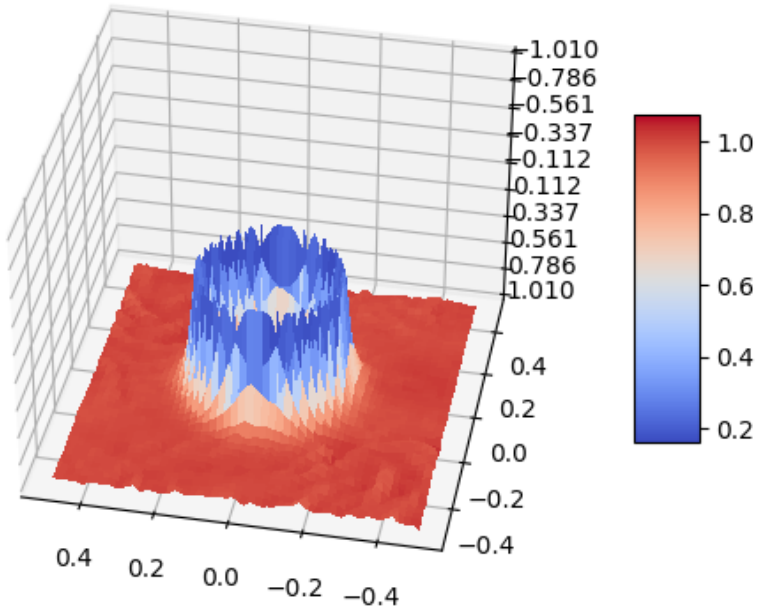
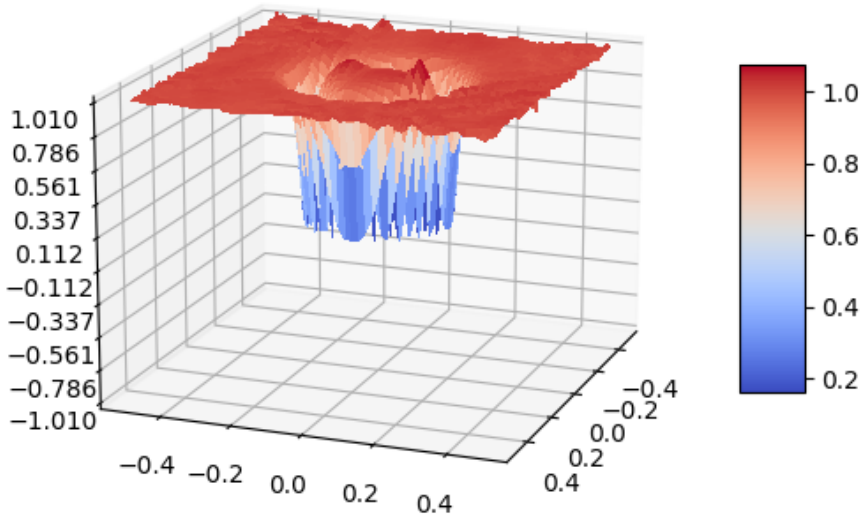
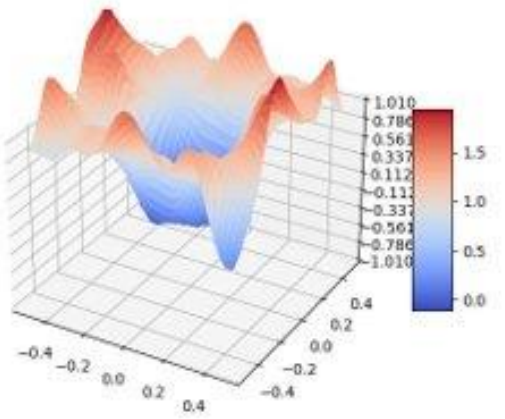
Master Thesis

Yannick Kees

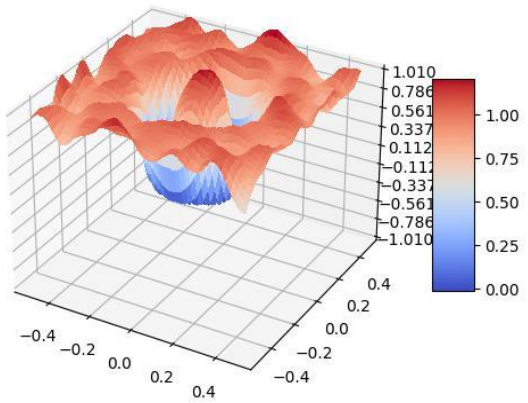




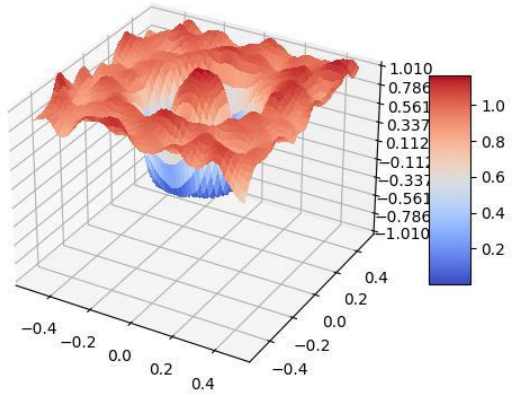
Using Fourier Features in Neural Networks leads to small oscillations on flat areas



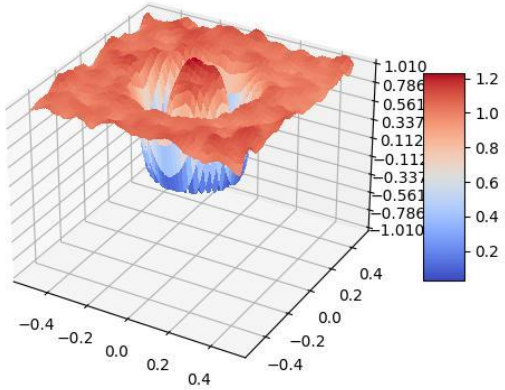
Step k=1



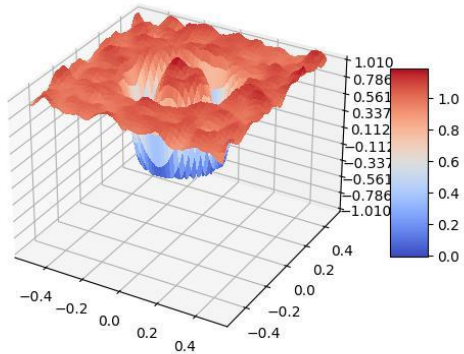
k=2



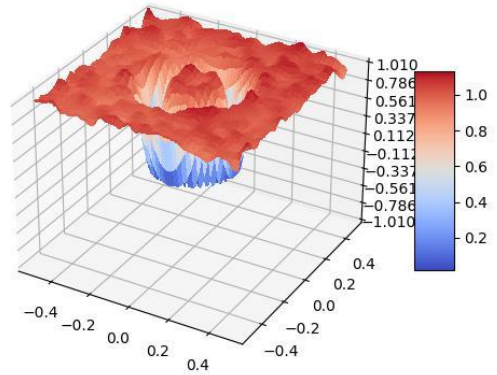
k=3



Step k=4

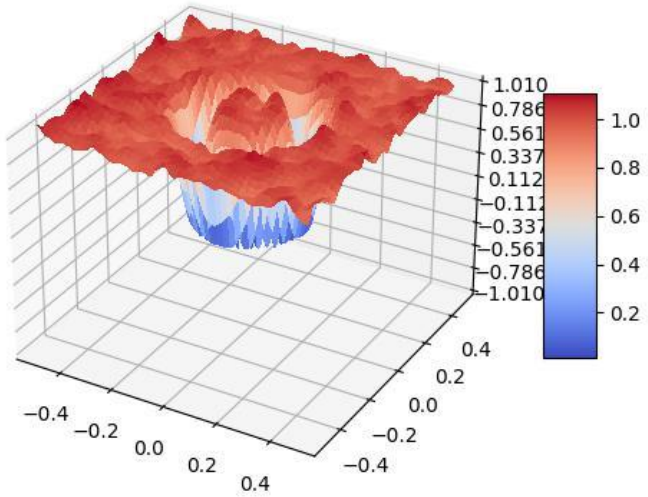


Step k=5

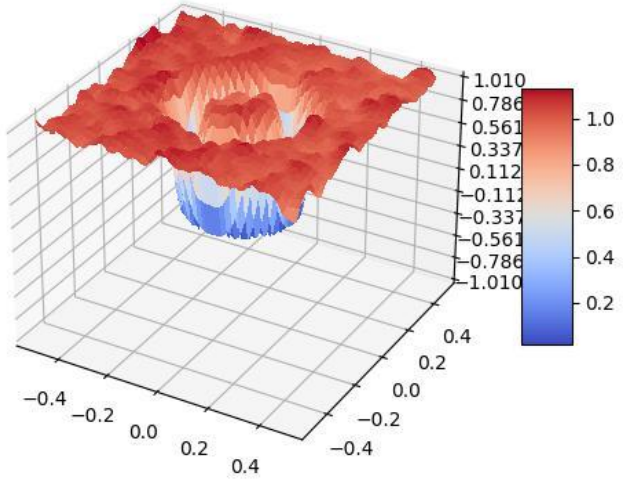


Step k=6

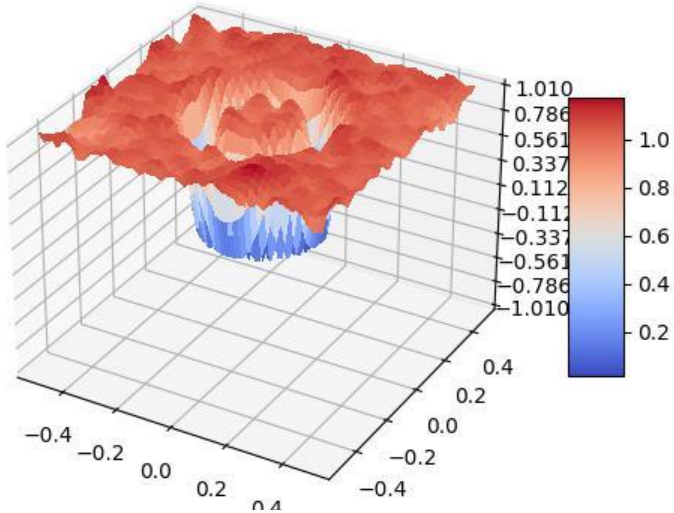
Now, we use a Fourier-Feature Network for minimizing movement



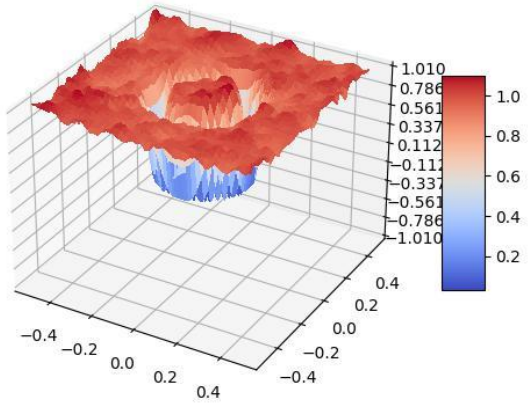
Step k=7



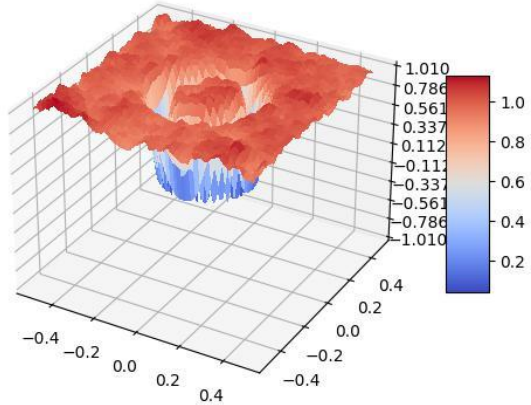
k=9



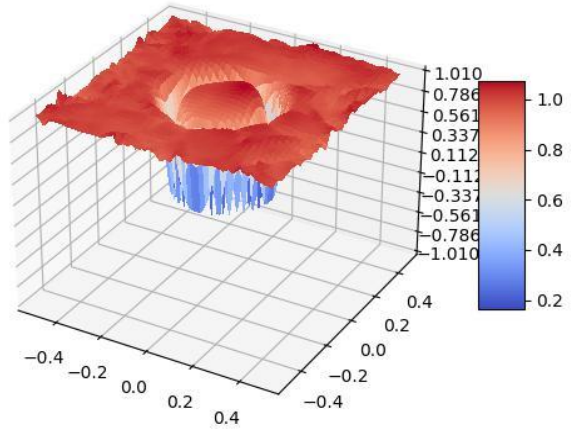
k=11



k=12



k=13



Step k=15

We can see, that this amplifies the effect in the first steps, but reduces over time