



Prof. R. Wattenhofer

# Deep Preference Learning for Advanced Home Search

If you ever searched for an apartment, room or house in Zurich you know that it is an unpleasant, long and tedious task. But does it have to be like that? What if it were more like Tinder, where you swipe homes left or right and an underlying algorithm would automatically learn to present you homes that best fit your needs?

In this thesis we look at developing a deep learning algorithm to personalize home search from sparse user feedback. You'll get an insight in the possibilities and limitations of fresh-from-research algorithms and adjust them to a hands-on problem. If you're up for the challenge, we are looking forward to meeting you to discuss more details.

**Requirements:** Knowledge in Deep Learning, or solid background in Machine Learning. Implementation experience is an advantage. You should be able to read and understand the first 12 chapters of the "Deep Learning Book" by Goodfellow et al. (available for free online from MIT press). If you are interested in the topic but new to deep learning we expect you to complete an introductory deep learning course before applying for the thesis, such as Andrew Ng's coursera course (use the free trial!)<sup>1</sup> or this Udacity course<sup>2</sup>. Further, experience with reinforcement learning or bandit problems is an advantage.



**Interested? Please contact us for more details!**

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<sup>1</sup><https://www.coursera.org/specializations/deep-learning>

<sup>2</sup><https://classroom.udacity.com/courses/ud730>