ETH
Eidgenössische Technische Hochschule Zürich
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Applying the GANN Framework to Recommender Systems

Master Thesis

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Abstract

This example thesis briefly shows the main features of our thesis style, and how to use it for your purposes.

Contents

[1]

Chapter 1

Introduction

- Introduce Problem statement
- Describe the goal of the thesis
- Clear question to be answered during the thesis

Chapter 2

Background

2.1 Recommendation Systems

- Specify the Problem of Recommendation as a scoring problem on items
- Describe possile bases for recommendation (User Based, Item Based, Session Based)
- Describe most popular existing solutions (Collaborative Filtering, Wide and Deep Learning)

2.2 Concepts/Models/...

- Describe RNNs
- Describe Hiearchical RNNs
- Describe the GAN Framework
- Describe Professor Forcing as an application of the GAN Framework to RNNs
- Describe Meta-Prod2Vec as an embedding framework and where we would use it inside our model

2.3 KPIs

- Describe different KPIs
- What do they meaure, how to optimize for it

Chapter 3

Dataset

3.1 Data Collection

- Describe how the system produces the data
- Describe how the data is stored

3.2 Data Extraction

- Describe how the data is extracted
- Describe what is done to clean the data
-

Chapter 4

System Overview

4.1 Model Architecture

- Describe Model Architecture
- Describe different Components of Model Architecture
- Describe different variants of the model (with/without pf, with/without embeddings)

4.2 Implementation

- Describe Class Diagram
- Describe Code Structure
- Describe Deployment
- Describe prediction mode/training mode

Chapter 5

Experiments

For each of the model variants evaluate the experiments offline and online.

5.1 Offline

5.1.1 Experiment Setup

5.1.2 Measurements

5.2 Online/Production Experiment Setup

5.2.1 Experiment Setup

5.2.2 Measurments

Chapter 6

Results

- bring everything together
- compare best performing model to automl from google

Appendix A

Dummy Appendix

You can defer lengthy calculations that would otherwise only interrupt the flow of your thesis to an appendix.

Bibliography

[1] Robert Bringhurst. *The Elements of Typographic Style*. Hartley & Marks, 1996.

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