Università degli Studi di Padova

School of Engineering Department of Information Engineering

Master Degree in Computer Engineering

Example of a Title

Example of a Subtitle

Supervisor:
Example Supervisor

Candidates:
Zanella Matteo

Abstract

This is an example of an abstract.

Contents

Chapter 1

Introduction

This is an example of a chapter...

1.1 Section 1.1

1.1.1 Subesction 1.1.1

Write something here...

1.2 Math equations examples

$$\begin{cases} \min \sum_{e \in E} c_e x_e & (1.1) \\ \sum_{e \in \delta(h)} x_e = 2 \quad \forall\, h \in V & (1.2) \\ \sum_{e \in \delta(S)} x_e \leq |S| - 1 \quad \forall\, S \subset V : v_1 \in S & (1.3) \\ 0 \leq x_e \leq 1 \quad \text{integer} \quad \forall\, e \in E & (1.4) \end{cases}$$

Constraints 1.2 impose that every node of the graph must be touched by exactly two edges of the cycle. This group of contraints alone isn't enough to guarantee to find a valid Hamiltonian Cycle: we could find lots of isolated cycles.

1.3 Pseudocode examples

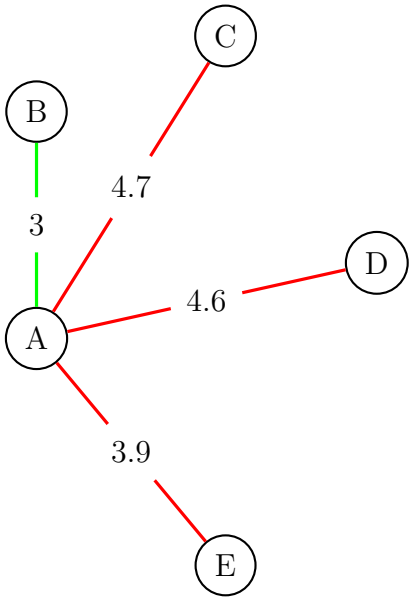
Algorithm 1 Greedy algorithm for the TSP

Input Starting node $s \in V$, Set of nodes V
Output List of $n := |V|$ nodes forming an Hamiltonian Cycle, Cost of the cycle

cycle $\leftarrow [s]$
cost $\leftarrow 0$
for $i = 0$ to $n - 2$ **do**
  next $\leftarrow \text{argmin}_v\{c_{cycle[i],v} \mid v \notin \text{cycle}\}$
  cost $\leftarrow$ cost $+ c_{cycle[i],next}$
  cycle$[i + 1] \leftarrow$ next
end for
cost $\leftarrow$ cost $+ c_{cycle[n-1],s}$

return cycle, cost

1.4 Graphs examples



Chapter 2

Bibliography

2.1 Articles examples

1. **Intra Coding of the HEVC Standard**
   Jani Lainema, Frank Bossen, Member, IEEE, Woo-Jin Han, Member, IEEE, Junghye Min, and Kemal Ugur

2. **Overview of the Versatile Video Coding (VVC) Standard and Its Applications**
   Benjamin Bross, Member, IEEE, Ye-Kui Wang, Yan Ye, Senior Member, IEEE, Shan Liu, Senior Member, IEEE, Jianle Chen, Senior Member, IEEE, Gary J. Sullivan, Fellow, IEEE, and Jens-Rainer Ohm, Member, IEEE

3. **Cisco white paper (2018-2023)**

4. G. Bjontegaard, **Calculation of average PSNR differences between RD-curves (VCEG-M33)** S. Pateux, J. Jung, An excel add-in for computing Bjontegaard metric and its evolution

5. X. Shang et al. **Color-Sensitivity-Based Combined PSNR for Objective Video Quality Assessment**

2.2 Web examples

[1] **Patch vvc**: https://github.com/fraunhoferhhi/vvenc/wiki/FFmpeg-Integration

[2] **Dataset**: https://media.xiph.org/video/derf

[3] **Suggested internet bandwdth (Netflix)**: https://help.netflix.com/en/node/306

[4] **Bjøntegaard metric (Python)**: https://pypi.org/project/bjontegaard/