UNIVERSITATEA POLITEHNICA BUCUREȘTI

FACULTATEA DE AUTOMATICĂ ȘI CALCULATOARE

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PROIECT DE DIPLOMĂ

Detecția imaginilor cu impact emoțional

și clasificarea tipurilor de violență

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DIPLOMA PROJECT

Graphic Content Detection in Images and

Classification of Types of Violence

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BUCHAREST

2020

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# Sinopsis

Copiii sunt cel mai ușor de influențat. Fie că acest lucru se face prin cuvinte sau prin fapte, prin ceea ce văd sau prin ceea ce aud, ei sunt la vârsta la care cel mai mic lucru își poate lăsa amprenta asupra lor. Ceea ce privesc, imaginile și filmele pe care le vizionează, chiar și știrile sau noutățile de care pot auzi și cu care intră în contact, pot avea un impact asupra lor. O imagine nepotrivită ajunsă sub ochii unui copil de 5 ani îl poate traumatiza pe viață sau, cel puțin, îi poate genera o temere de care să nu poată scăpa niciodată.

Tehnologia a evoluat, s-a extins într-atât de mult, încât este prezentă în viețile tuturor în cele mai mici detalii, și din ce în ce mai pregnant, la îndemâna copiilor. Pornind de la această realitate și pentru a îmbunătăți experiența aplicațiilor de parental control, este necesară detecția imaginilor ce conțin scene de violență sau scene cu impact emoținal puternic, imagini ce conțin sânge sau înfățisează corpuri umane având plăgi deschise sau cadavre, incendii violente sau prezența armelor.

# Abstract

The children are the easiest to influence. Whether this is done by words or by actions, through what they see or what they hear, they find themselves at the age when the smallest thing can leave a mark on them. Anything they watch, the images, the movies, or even the news they hear or happen to come across, can have a major impact on their lives. An inappropriate image that comes under the attention of a 5-year-old child, can traumatize him for life, or at least cause him severe fear that he would never be able to get rid of.

The technology has evolved and expanded so much over the last decades, that is present in everybody’s life in every little aspect, and more and more significantly at children’s disposal. Starting from this reality and for enhancing the experience of parental control applications, it is necessary the identification of the images that contain scenes of violence or emotionally disturbing scenes, images that contain blood or depicts human bodies with open wounds, violent fires or presence of guns and weapons.

# Introduction

## Background

### Children exposure to violence

The digital era has allowed most people of the planet to be connected to the Internet via continuously shrinking devices: personal computers, smartphones, smart gadgets, smartwatches etc., meaning anyone has access to any kind of information at any moment. Alongside the obvious and huge advantages Internet, media and technology altogether have brought to the world, there are many risks worth noting and addressing.

Focusing on the rapid spread of smart gadgets in the homes of most of the people, forth comes an issue that has been long debated and argued: children exposure to violence through media. Whether is television or movies, games, news, everything a child hears and perceives has an impact on him/her. It is in the hands of the parents to prevent their children from seeing images that would cause them anxiety, fear, misunderstanding of society, or even traumas.

The common adage “A picture is worth a thousand words” denotes exactly how an image can influence a child, especially if we are talking about inappropriate images. Studies [1]have shown that aggressive or antisocial behaviour is heightened in children after watching violent television or films. Science tells us that early exposure to extremely fearful events affects the developing brain, particularly in those areas involved in emotions and learning. [2] When children see images that are emotionally disturbing, images that depicts the world in an inadequate manner for their young minds to comprehend, they can learn fear from situations they should not be exposed to. The brain stores what we see, and how often do we hear people say, “I have seen something I will not forget my entire life”. If that is the case for mature persons, then even more importance should be given to what children are allowed to see.

### Parental Control Applications

### Classification of violence and graphic content

# References

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