Final Project 2023

Project Outline

Anton Irvold   Christoffer Krath

Title Proposals

- "Using computer vision and AI techniques to improve crowd safety management"
- "Improval of crowd safety using computer vision and possibly various AI aspects"

Administrative Info

Collaborators from Event Safety

- Sofie Dahl, sofie@eventsafety.dk

- Christian Sejlund, christian@eventsafety.dk

SDU supervisor

Sune Lundø Sørensen, slso@mmmi.sdu.dk

Context and Background

While festival injuries are not a new issue, it is on the rise. As seen from Figure 1 accidents, fatalities and injuries at festivals and concerts worldwide are on the rise, with just below 5.000 worldwide deaths in the decade of 2010-2019. This can be attributed to several causes, according to Raineri (2004): First of all, an increase in popularity for outdoor music festivals resulting in more and larger festivals with large crowds. Also, high-risk behavior among crowd attendants and the performing artist's music, behavior, and stage show affects the crowd's safety. Generally, it has become more dangerous to attend these festivals since the 70s.

Feliciani, Claudio, Alessandro Corbetta, Milad Haghani, and Katsuhiro Nishinari. 2023.
   "Trends in Crowd Accidents Based on an Analysis of Press Reports." *Safety Science* 164:
   106174. https://doi.org/https://doi.org/10.1016/j.ssci.2023.106174.

(a) Accidents by decade

(b) Fatalities by decade
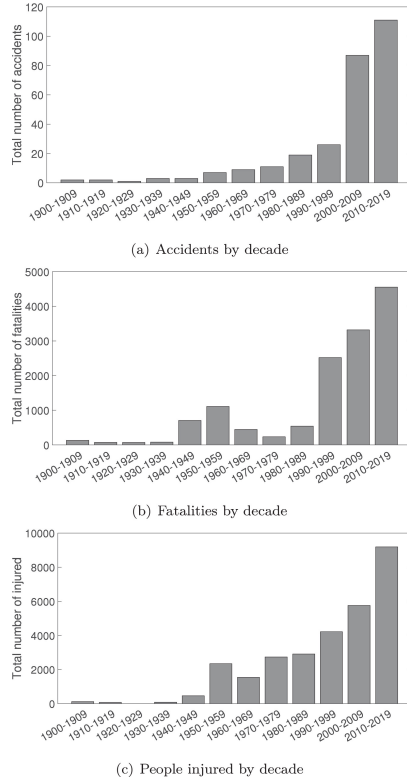

(c) People injured by decade

Figure 1: Fatalities in crowds graph (Figure from Feliciani et al. 2023)

Raineri, Aldo. 2004. "The Causes and Prevention of Serious Crowd Injury and Fatalities at Outdoor Music Festivals." In. https://doi.org/10.13140/2.1.3036.0005.