

## **UNDERGRADUATES PURSUING RESEARCH IN SCIENCE AND ENGINEERING (UPRISE)**

## ELECTRICAL AND COMPUTER ENGINEERING ENGINEERING AND APPLIED SCIENCE

## SUMMER RESEARCH OPPORTUNITIES FOR UNDERGRADUATE students

FOR APPLICATION YEAR: 2023

PROJECT TITLE: Video Summary Generation

Mehdi Norouzi
Associate Professor - Educator (Lab37)
Department of Electrical Engineering and
Computer Science
830 Old Chem
University of Cincinnati, Cincinnati, OH
(513)-549-3435
norouzmi@ucmail.uc.edu

## Project Description

There are multiple algorithms for generating video summaries; e.g., we can create a summary (highlight) of a soccer game based on the critical shots, goals, or even audience voice.

In this project, the undergraduate student will work with graduate students under the supervision of Dr. Norouzi to do the following tasks:

- 1) Form a video summary generation as a knapsack problem
- 2) Implement an algorithm to generate a video summary
- 3) Evaluate the effect of shot boundaries on the video summary

Basic Python programming knowledge is required.