ClubCast.tv – Advancing Sports Streaming with Computer Vision and Machine Learning

Background:
ClubCast is a software company founded by former Mines students with the mission of providing a platform for club and intramural sports to be streamed while simultaneously helping these teams fundraise. Since launching in Fall 2024, the platform has streamed over 500 games, gained more than 2,000 users, and helped teams raise over $15,000.

Project Summary:
Interested in creating some sports-based computer vision? We are looking for students to help us create a model that can pick out the key moments in a match recording, or VOD (video on-demand), for a given sport. The end deliverable is a runnable process that takes a video and a trained model as input, and spits out a list of start and end times corresponding to ranges of match highlights ,and what the highlight is. The cheaper and faster it can run, the better! We use Roboflow to centralize our datasets and model training (for images); you will deliver a dataset within a Roboflow project we will help you set up. You can explore and do your model training however you would like (e.g. a well-written Python script using libraries like pytorch and supervision could help you move faster).

Team Size:
3–4 students

Location:
Remote (online meetings)

Intellectual Property:
All project work and related deliverables will be assigned to and owned by ClubCast.

Student Benefits:

- Hands-on experience applying computer vision and machine learning to real-world problems
- Direct impact on a platform that supports the Mines community
- Opportunity to work with a growing startup founded by Mines alumni

Preferred Skills/Software:

- Python
- OpenCV / Roboflow
- Supervision / PyTorch
- Basic understanding of object detection and classification models
- Familiarity with sports analytics is a plus