

Real-Time Image Processing, and Information Extraction with Testing for AI-driven eSports Coaching

Project Description

We invite you to explore the challenge of integrating computer vision into the analysis of the game League of Legends, using the LoL-v2t (<https://tsunehiko.github.io/lol-v2t/>) dataset. This project will allow you to apply and develop data analysis and machine learning techniques to extract detailed real-time metrics, such as:

- **Game Dynamics:** Analysis of minions killed, gold accumulated, and damage patterns among players.
- **Behavioral Analysis:** Study of strategies through heatmaps and emotional reactions of players.
- **Prediction and Modeling:** Use of predictive models to anticipate in-game events.

Project Phases

This project will be developed in three sequential stages, each building on the last:

1. **Data Extraction:** Transforming images into analyzable data sets. This phase will last 10-15% of total project time.
2. **Real-Time Validation:** Testing models in dynamic game scenarios. Given a video input, testing real-time data extraction with the implemented algorithm from 1. This phase will last another 10-15% of total project time.
3. **Predictive Modeling:** Implementation of algorithms capable of action detection (when, where and how long a certain in game event happened), classification and evaluation (prediction) of the success of the event detected. This phase will take the majority of the project duration, about 70-80%.

Career Opportunities

Successfully completing your thesis with us will position you perfectly for employment opportunities in our development and research teams, accelerated by the NVIDIA Inception program. This project is ideal for those looking to make a significant impact in the field of technology applied to digital entertainment and beyond.

Join Us

If you are ready to take on this challenge and want to contribute to the future of video games with your technical expertise, we encourage you to apply. Immerse yourself in a project that will challenge your ability to solve complex problems and transform the way video games are analyzed.