Literature Research on Event Cameras

Research Project

May 13, 2025

Event cameras is a novel imaging device that registers only changes in brightness asynchronously. The image below shows an example of the output of an event camera. The characteristics of event cameras offers many new possibilities.

Our professorship is in possession of an event camera, the PROPHESEE EVK4. We want to offer the students the opportunity to experiment with this cutting-edge device and gain experience in advanced computer vision research.

The student's work should contain the following steps:

- Literature research on the possible application fields of the event camera
- Literature research on state-of-the-art image processing techniques of event camera output
- Write a technical report on the results of the literature research

Requirements:

- Basic understanding of computer vision
- Preferably good results in Computer Vision 1 or Image Processing and Pattern Recognition

Additional information:

- The student is encouraged to try to implement interested application methods and expand the work into a master thesis
- In this case the student should have good programming skills in python or C/C++ as well as basic understanding of deep learning

Contact information:

If you are interested in this topic, please contact Jingrui Yu through Email: jingrui.yu@etit.tu-chemnitz.de