ACCESS METAVISION INTELLIGENCE SDK FULL SOURCE CODE, CUSTOMIZE IT TO YOUR NEEDS, DISTRIBUTE IT FOR THE HARDWARE PLATFORM OF YOUR CHOICE.

OVERVIEW

- Create your own product with Metavision Intelligence software inside
    - Visualize events with our tools and libraries created by pioneers of event-based sensors
    - Process events with the largest set of event-based vision algorithms
    - Tune algorithms to your need with full access to source code
    - Share your product based on Prophesee sensors to your customer
- Get access to the source code of all the functional modules
    - Computer Vision, Analytics, Machine Learning, Camera Calibration and more
    - C++ and Python API
    - Code samples and tutorials
- Leverage the open-source architecture of the core modules to participate in the event-based community
- Compiles out of the box on Windows and Ubuntu
- Compatible with Prophesee vision systems and « Powered by Prophesee » partners' products
- Online documentation at docs.prophesee.ai (300+ pages, Jupyter notebooks, reference data, extensive guidelines...)
- Knowledge Center access (Technical app notes, Advanced hardware manuals, Personal ticketing tool, Community Forum and more)
- 2 hours premium support included (troubleshooting, application and code analysis etc...)
- Subject to Metavision Intelligence SDK Licensing Terms and Conditions with initial license fee and volume-based distribution fees
- Support for new versions for one year with additional year extensions available

PROPHESEE METAVISION INTELLIGENCE SDK - SOURCE

MODULE	DESCRIPTION
HAL	Hardware Abstraction Layer. Generic access to hardware features of the cameras
Base	Basic classes and utility functions used in other modules
Core	Generic and commonly used processing blocks
Core ML	Generic functions for Machine Learning, event_to_video and video_to_event pipelines
Driver	User-friendly API to ease the interaction with event-based systems, access event data and control sensor settings. This module is based on HAL and allows access to all HAL classes.
UI	Utility classes to manage on-screen display and react to system or user events
CV	Algorithms to filter, transform or extract information from events streams
CV3D	Algorithms to localize the camera in 3d and reconstruct its environment
Analytics	Algorithms to monitor and analyze the event stream, e.g. counting, tracking, measuring vibrations etc.
Calibration	Algorithms to calibrate an event-based camera
ML	Python modules to manipulate event-based datasets and design event-based Neural Networks. Comes with pre-trained models and inference demos with event-based cameras

Nb of Algorithm	95
Nb of Code Samples	67
Nb of Tools and Apps	11

USER-FRIENDLY API IN C++ AND PYTHON

```cpp
int main(int argc, char *argv[]) {
    Metavision::Camera cam; // create the camera

    // open the first available camera
    cam = Metavision::Camera::from_first_available();

    // to analyze the events, we add a callback that will be called periodically
    // to give access to the latest events
    cam.cd().add_callback(count_events);

    // start the camera
    cam.start();

    // keep running while the camera is on or the recording is not finished
    while (cam.is_running()) {}

    // stop the camera
    cam.stop();
}
```
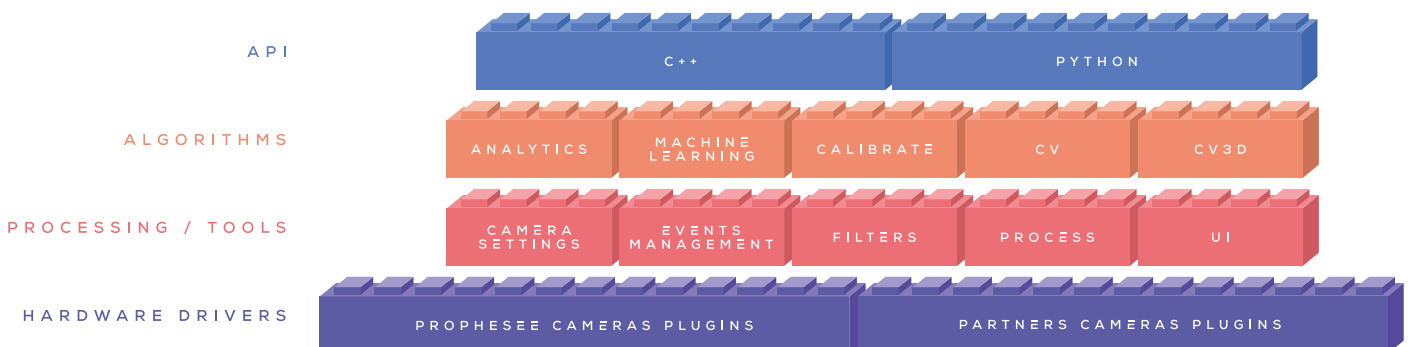
```python
def main():
    """ Main """
    args = parse_args()

    # Events iterator on Camera or RAW file
    mv_iterator = EventsIterator(input_path=args.input_path, delta_t=1000)

    # Process events
    for evs in mv_iterator:
        if evs.size == 0:
            print("The current event buffer is empty.")
        else:
            min_t = evs['t'][0]    # Get the timestamp of the first event of this callback
            max_t = evs['t'][-1]   # Get the timestamp of the last event of this callback
            counter = evs.size  # Local counter
            print(f"There were {counter} events in this event buffer.")
            print(f"The current buffer included events from {min_t} to {max_t} us.")
```


API — C++ | PYTHON

ALGORITHMS — ANALYTICS | MACHINE LEARNING | CALIBRATE | CV | CV3D

PROCESSING / TOOLS — CAMERA SETTINGS | EVENTS MANAGEMENT | FILTERS | PROCESS | UI

HARDWARE DRIVERS — PROPHESEE CAMERAS PLUGINS | PARTNERS CAMERAS PLUGINS

ORDER INFORMATION

REQUEST MORE INFORMATION, PRODUCT DATASHEET OR QUOTE HERE: https://www.prophesee.ai/metavision-intelligence/