Do It Yourself “Autonomous Driving Car”
Hands-On Maker Event and Project Seminar

**Maker Event:**
November 19th, G22A-H2, from 17:00, open to all interested in autonomous driving!
Number of seats is limited, please register via the e-Learning system until Nov 12th!
For detailed information and registration, please visit: http://www.elektronik.ovgu.de/MEAF

Alternatively, for further questions please contact:
Prof. Vadim Issakov, Lehrstuhl für Elektronik, IIKT, FEIT
Dr. Mathias Magdowski, Lehrstuhl für Elektromagnetische Verträglichkeit, IMT, FEIT

**Project Seminar:**
November 20th, from 10:00, for students interested to build such a car within a research project

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**Do it Yourself (DIY) Autonomous Driving Car**

**Use Case:** DIY offering to rebuild your own AI based Autonomous Driving Car, based on Arduino, Raspberry Pi, TensorFlow

**Approach:** Use a common known AI platform “Donkey-Car” and adapt this to IFX Products

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### Benefits

- User Interface (PC/Mobile) already available
- Modular concept: PWM-board is replaced **XMC/Motor-Shield** and still connected via I²C-Bus (protocol not touched)
- All design files and building instruction online available: [www.infineon.com/DIY-AI-Car](http://www.infineon.com/DIY-AI-Car)

### Key learnings

- Everyone can “train” an AI based system
- How to “train” effective
- Fun to “play” with it

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**Description of the Use Case**

[Image of a car with sensors and electronics]

- Hands-on AI experience
- Open source project
- Autonomous driving

- Thousands of Libraries
- Millions of Arduino programmers and examples
- Endless extension possibilities

[Image of TensorFlow logo]

- What can you do?
- Choose your own car (at least a microcontroller)
- Train your car with your phone for learning
- Record images, usingango’s software
- Analyze results, usingango’s software
- Use TensorFlow, XMC, and Raspberry Pi

[Image of a car with a machine learning algorithm]

- How can you build one?
- Select a technology and an AI car, and starting building the necessary hardware to build the autonomous driving system.
- TensorFlow, XMC, and Raspberry Pi
- Make sure the hardware is compatible and supported by the software.

[Image of a community]

- Join the Donkey community.
- Follow the links and the community guidelines.

- More information at [www.donkeycar.com](http://www.donkeycar.com)