

0. ORGANIZATION
1. DIGITAL TECHNOLOGIES
2. SENSORS
3. ACTUATORS
4. COMPUTER VISION
5. GENERATIVE AI
6. NATURAL LANGUAGE PROCESSING
7. USER INTERFACES
8. CLOUD SERVICES
9. DATABASES

The slides are meant as visual support for the lecture.
They are neither a documentation nor a script.

Please do not print the slides.

Comments and feedback at n.meseth@hs-osnabrueck.de

ORGANIZATION

ILIAS

Microsoft Teams

sessions

group work

examination

working environment

visual studio code

python

tinkerforge

git

DIGITAL TECHNOLOGIES

a model for solving problems



cyber physical
systems

artificial
intelligence

software
prototyping

cyber physical
systems

sensors

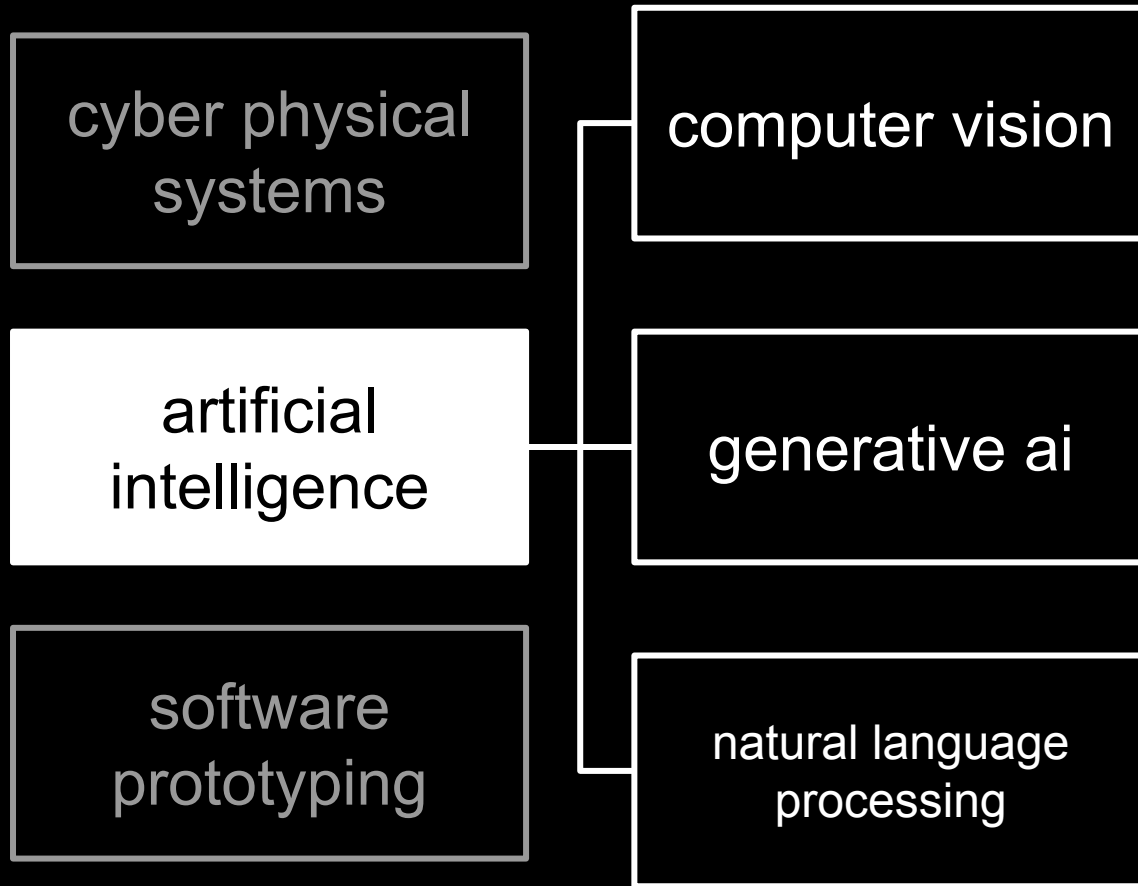
actuators

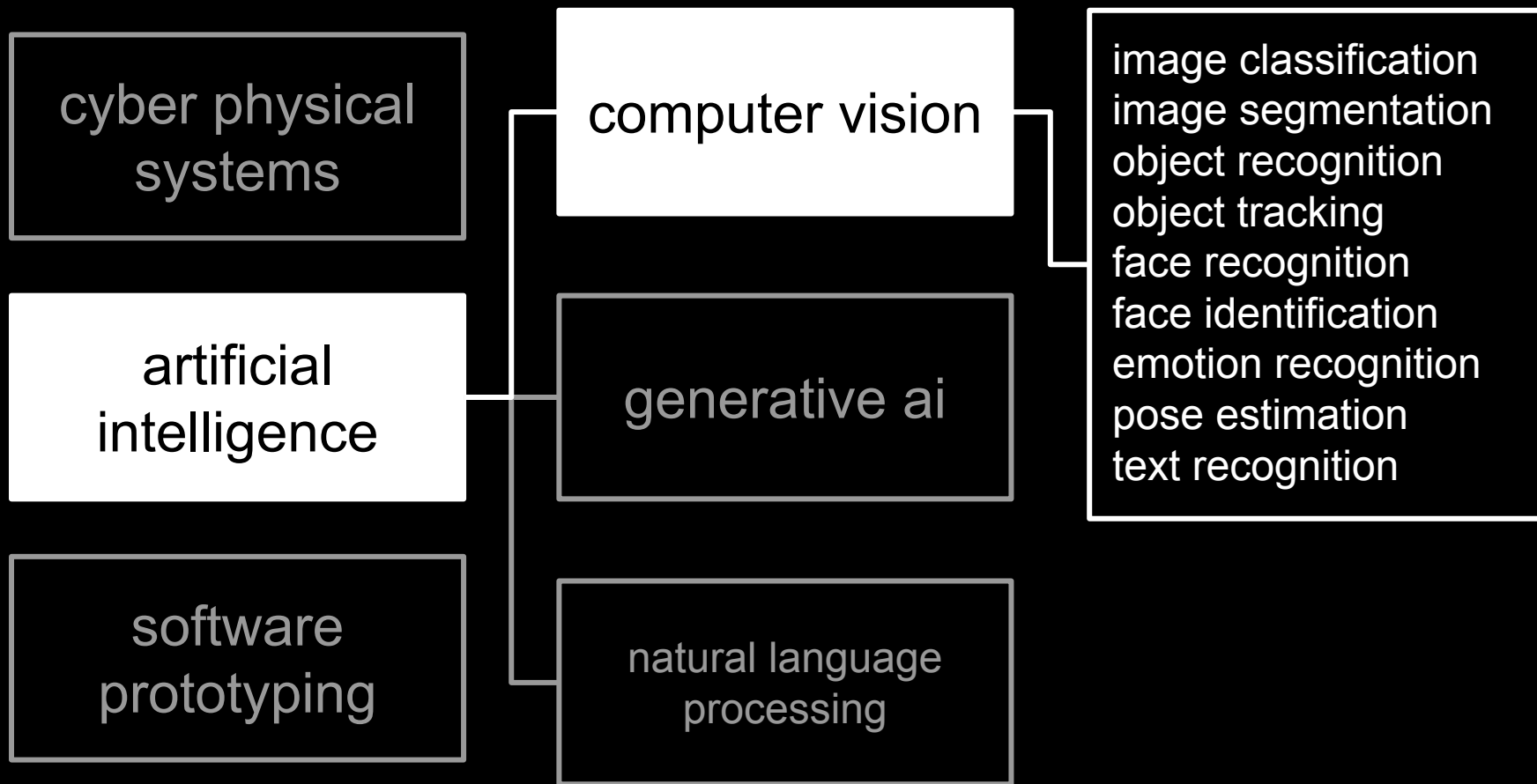
artificial
intelligence

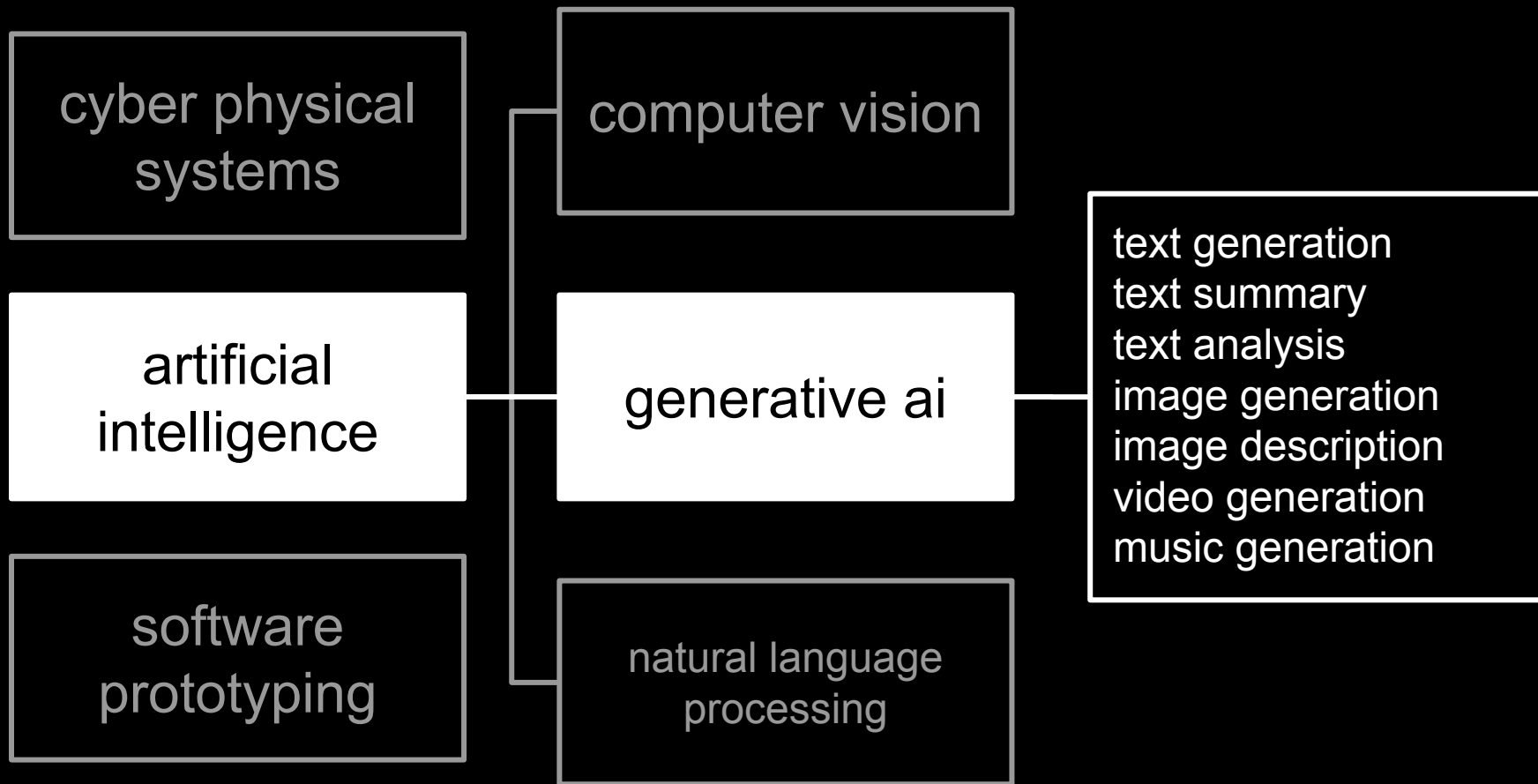
temperature
humidity
co2
uv light
ambient light
sound pressure
thermal image
camera
...

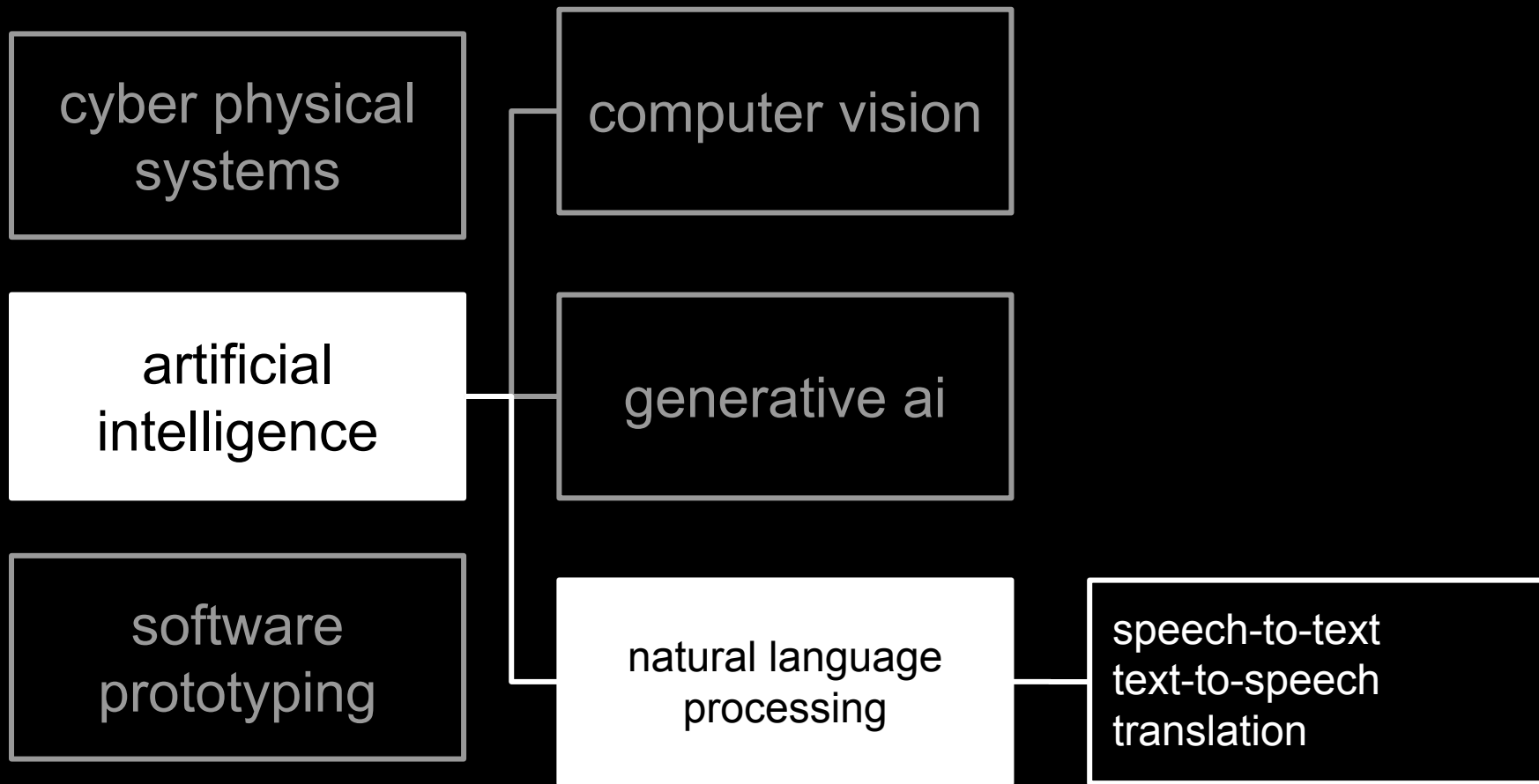
led
speaker
display
motor
...

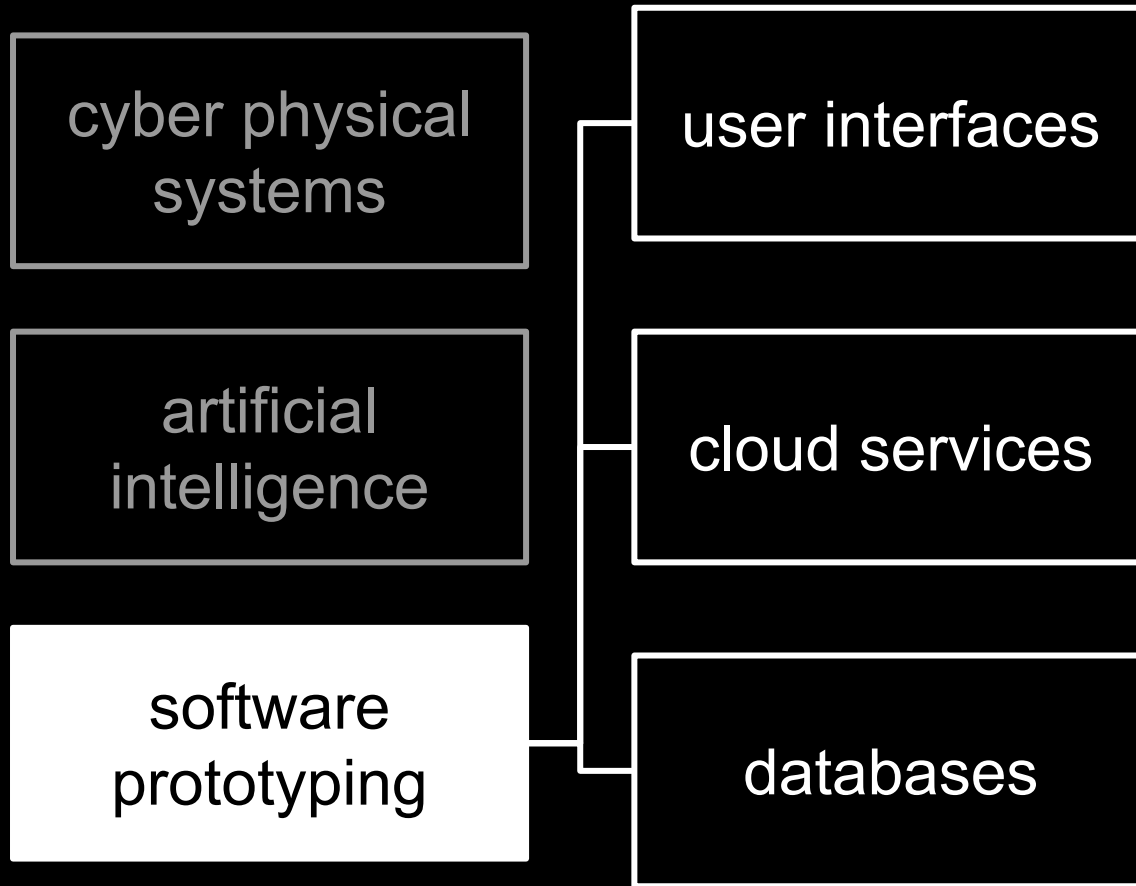
software
prototyping











introductory example

visual studio code
programs
python

LEDs

large language models

speech-to-text

user interface