

Super Intelligence - The End or the Last Hope for Humans?

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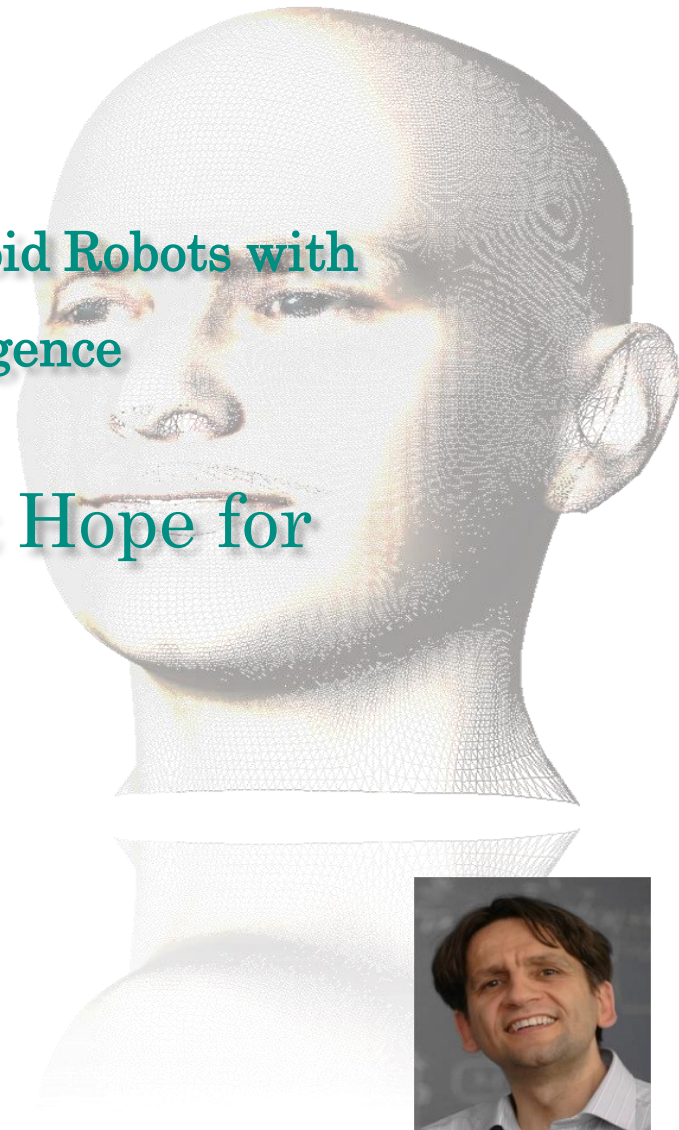




A Tutorial how to Train Humanoid Robots with Artificial Super Intelligence

—

“The End or the Last Hope for Humans?”



www.VISIR.org

Prof. Dr. M. Rättsch



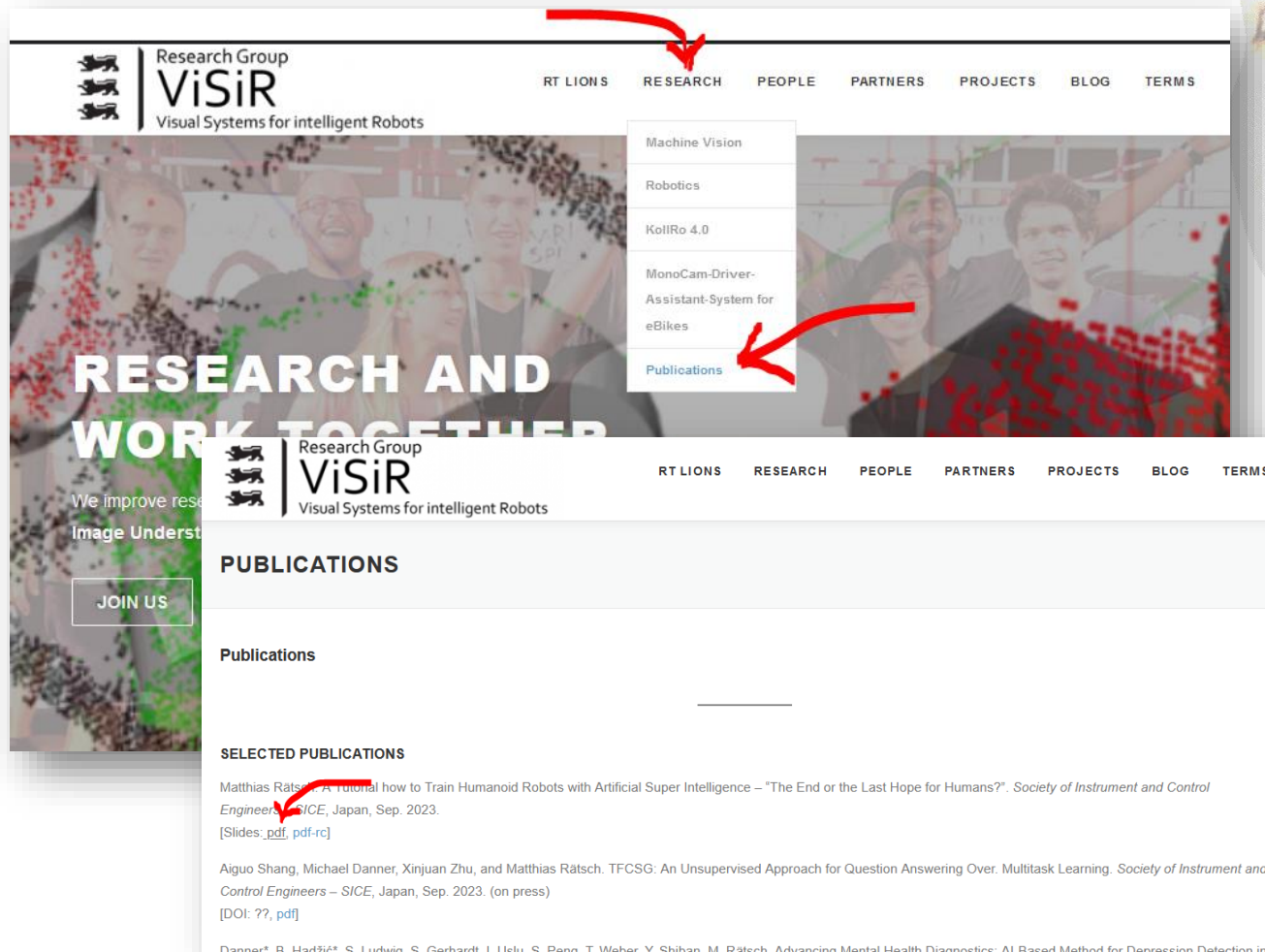
Prof. Matthias Rättsch

Head of the Interactive and Mobile Robotics
Group and of the RoboCup Team RT-Lions
Reutlingen University, Germany

email: matthias@visir.org

web: www.ViSiR.org

- Slides of the Tutorial with ALL links
- ➔ Type "www.visir.org" (Laptop!) or scan QR-Code (Phone!)
- ➔ Download Slides as pdf, to **simply click on ALL LINKS!!**



- Since 2013 Professor at the Reutlingen University, **head of the Visual Systems and Intelligent Robots group** (www.ViSiR.org). In 2008, **Ph.D.** degree in the Graphics and Vision Research Group (GraVis) at the University of Basel, Switzerland. Until 2013 with **world leading company Cognitec Systems** for face recognition (e.g. **eGate at each European airport**).
- **Research interests:** Image Understanding, Computer Vision, Artificial Intelligence, Deep Learning, AI-on-the-Edge, Autonomous Driving, Humanoid Robots, Bionic Intelligence and Grasping, Human Robot Collaboration, Large Language Models, Intelligent Chatbots, AI-Ethics.
- **Head of the RoboCup team RT-Lions** (www.rt-lions.de): **World Champion** in Graz 2009, **German Master** '09, **Iran Master** '11, ..., still acting **Vice World Champion**. Change to the **RoboCup@Home** League: **1st Prize** Informatics Inside '14 + '15, **1st Prize** at Portuguese Open '16, **4th Prize** **German Open**, **8th at World Championship** in Nagoya, Japan '17, **1st Prize** SICK Robot Day '18, **5th at World Championship** in Sydney, Australia '19 and **recently 3rd Prize at World Championship Worldwide Virtual** 2021
- His Research Group [ViSiR](http://www.ViSiR.org) and [RT-Lions](http://www.rt-lions.de) team have more than **20 members** (4 PhDs/Postdoc's, 5 **Assistants** and many students).
- **Member of the program committee** and **session chair** for several international conferences and **invited speeches** in Face Analysis and Robot Vision. Published more than 50 international academic research papers and journals, like **IEEE Transactions on Image Processing** or at the **IEEE SIGGRAPH** conference. **Awards:** e.g., Otto-Johannsen-Prize, IEEE ICIP and others.
- Leading **1.1Mill € (>175 Mill JPY)** founded industrial project "**KollRo 4.0**" (with BMBF, BOSCH, Mercedes Benz), two **ZIM** projects (0.4Mill €), **ProFö "BInGO"** project (0.4Mill €). **InvestBW "FAIR"** project (0.2Mill €), and further **2.4 Mill € are proposed**. Several funded industrial projects, like RTMO (BMBF), GES 3D (BMBF), Face-HMI (SAB, COG), and I-Search (BMBF).

www.ViSiR.org



- 2010 - 2013 with **world leading company 'Cognitec Systems'** for face recognition
- We could win the **rollout of our eGate-system at each European airport**

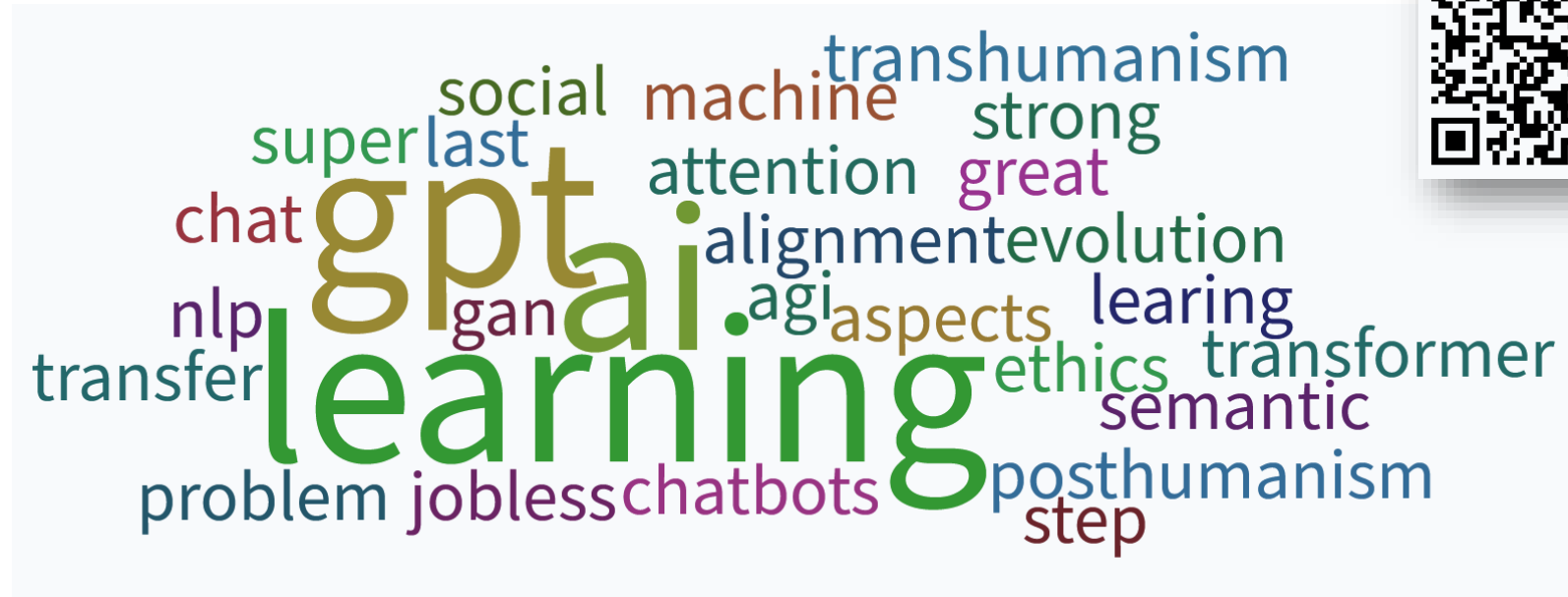


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➤ “ARTIFICIAL SUPER INTELLIGENCE”

➔ Which words come to your mind FIRST?



SCAN ME



Artificial Super Intelligence

“The End or the Last Hope for Humans?”

How AI is Changing our World?!

1. Autonomous Driving
→ Humans ‘out of the loop’?
2. Intelligent CoBots
→ Robot Revolution?
3. Emotional ChatGPT-Bot
→ Artificial Moral Advisor?
4. FAIR Automated Recruiting
→ Acceptation of AI?

strong machineproblem
chatbots chat alignment
attention agi aigpt transformer
gan ethics great super
learning nlp
transfer

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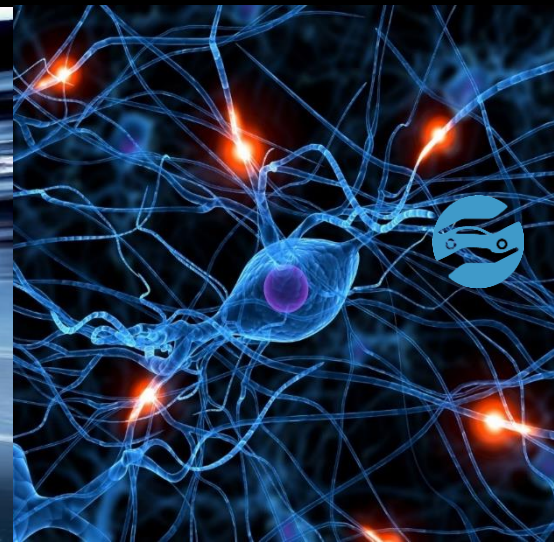
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Hochschule Reutlingen
Reutlingen University

Fast and Robust RGB-D Scene Labeling for Autonomous Driving

Manuel Jasch¹, Thomas Weber¹, Matthias Räscht²

Reutlingen University

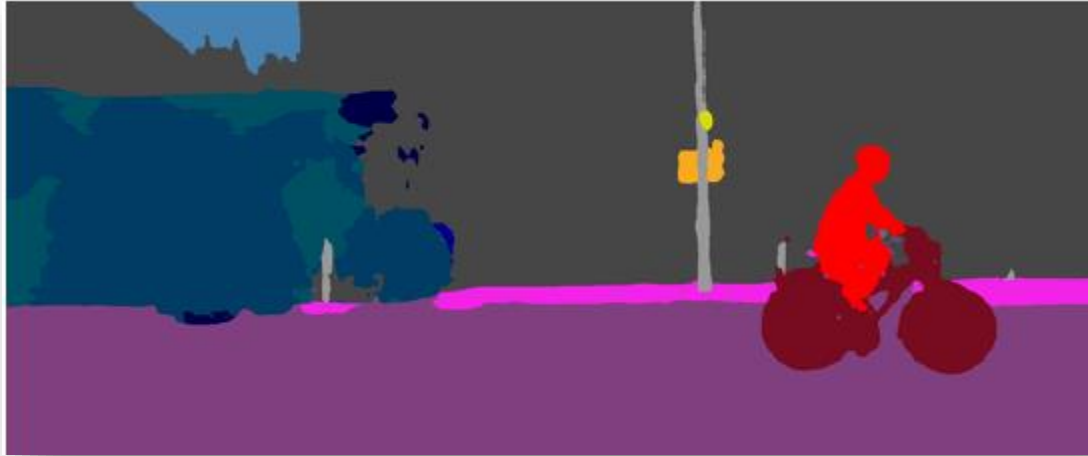
info@manuel-jasch.de, {thomas.weber, matthias.raetsch}@reutlingen-university.de



Mercedes-Benz
The best or nothing.

➤ What is the Problem?

➤ Same as by FIRST KILLED HUMAN by TESLA!



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Mercedes-
Benz
The best or nothing.

→ “White eagle in front of white sky” ;-)

➤ Chance to win „Otto Johannsen Prize”

→ Artificial Intelligence – CNNs!

→ Autonomous Driving – Scene Labeling!

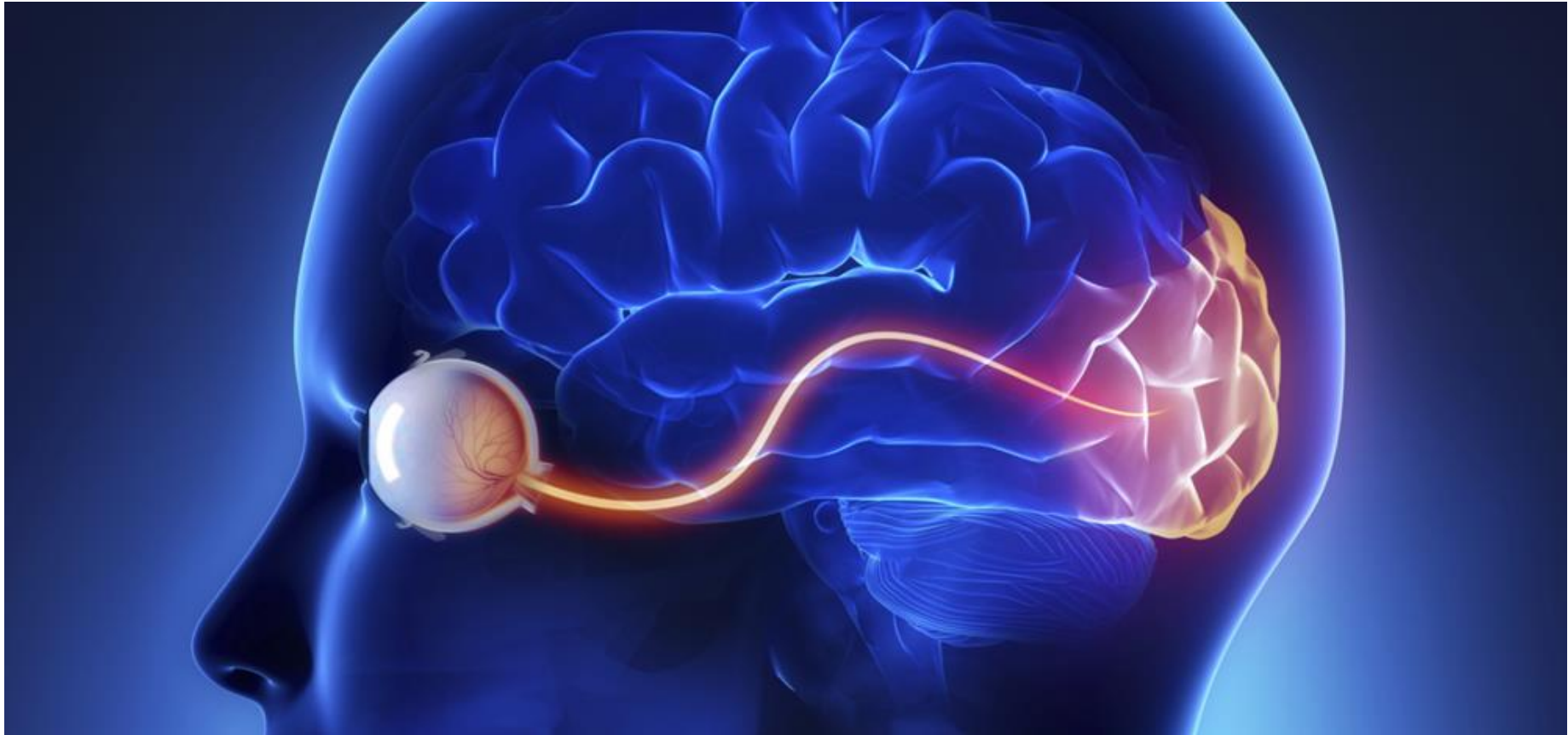
→ Mercedes-Benz AG – The Best or Nothing!

➔ **Can we solve it and win the PRIZE ???**

➤ How we, humans can learn and solve problems?



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Reutlingen University



➔ Using human vision cortex as model!

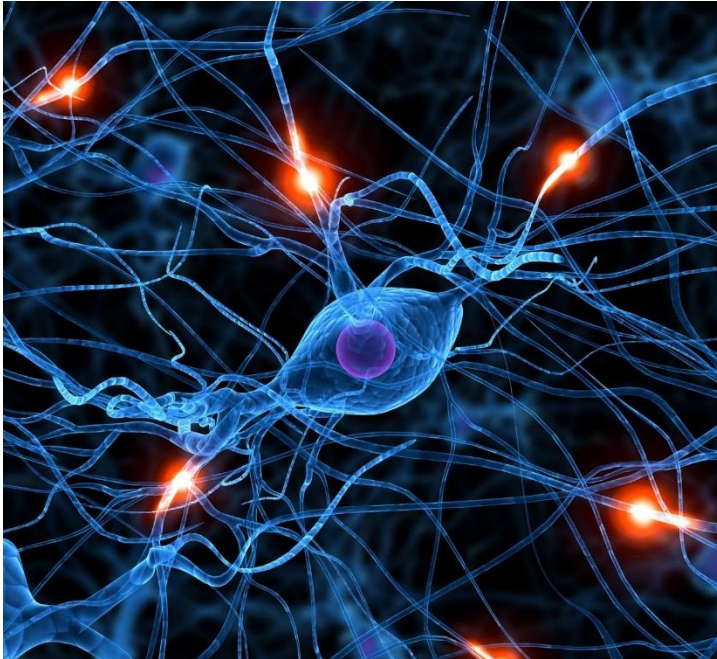
- How we, humans can learn and solve problems?
 - NEURON (BRAIN) = PERCEPTRON (NN)



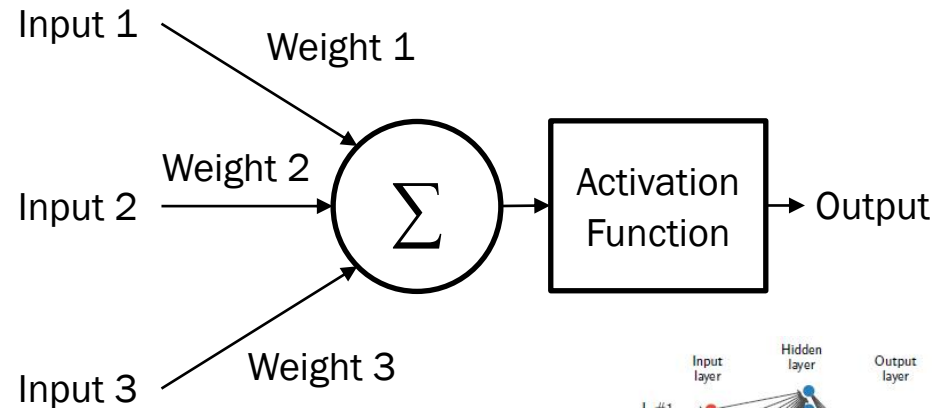
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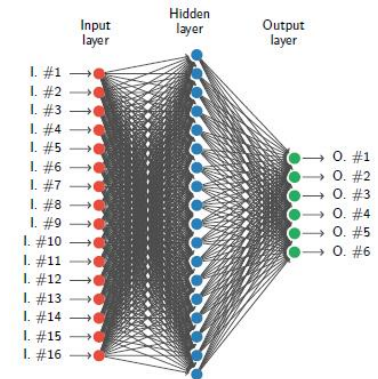
Mercedes-Benz
The best or nothing.



Biological Neuron Model



Mathematical Neuron Model



- ➔ 6x more internet pages as neurons in our brain!
- ➔ Trillions of parameters to train!

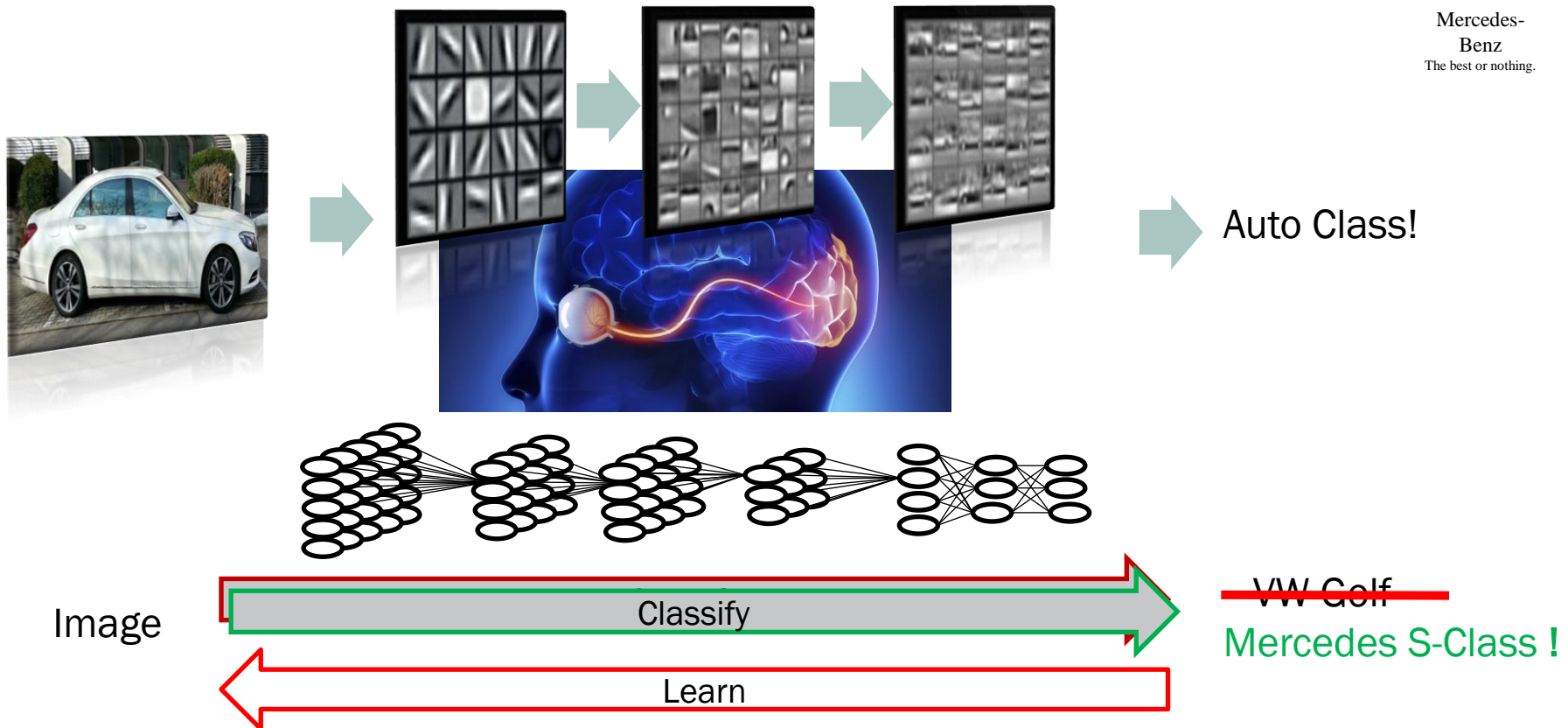
- How we, humans can learn and solve problems?
 - Virtual Cortex works in levels! Starting by edges,... up till complex objects! Based on 'try and error' loops!



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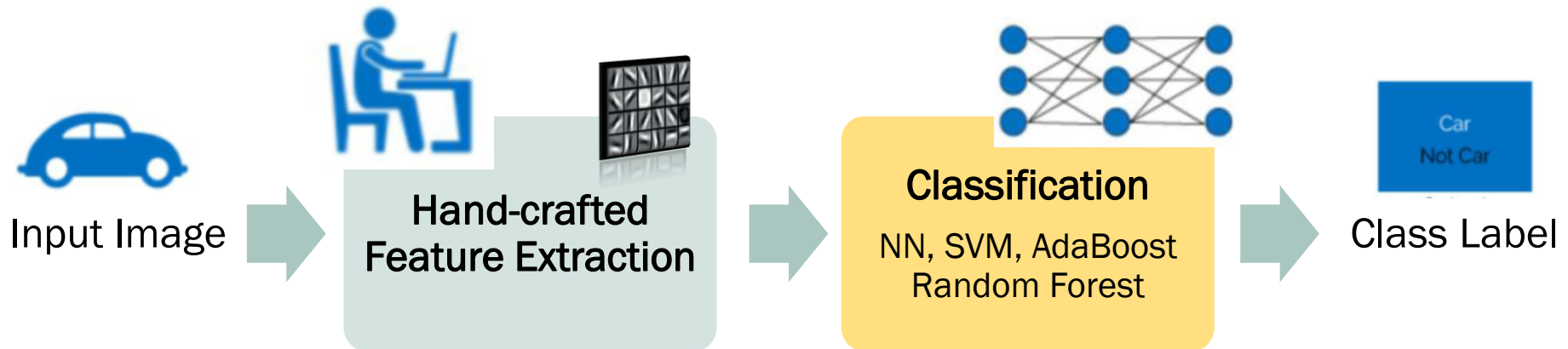


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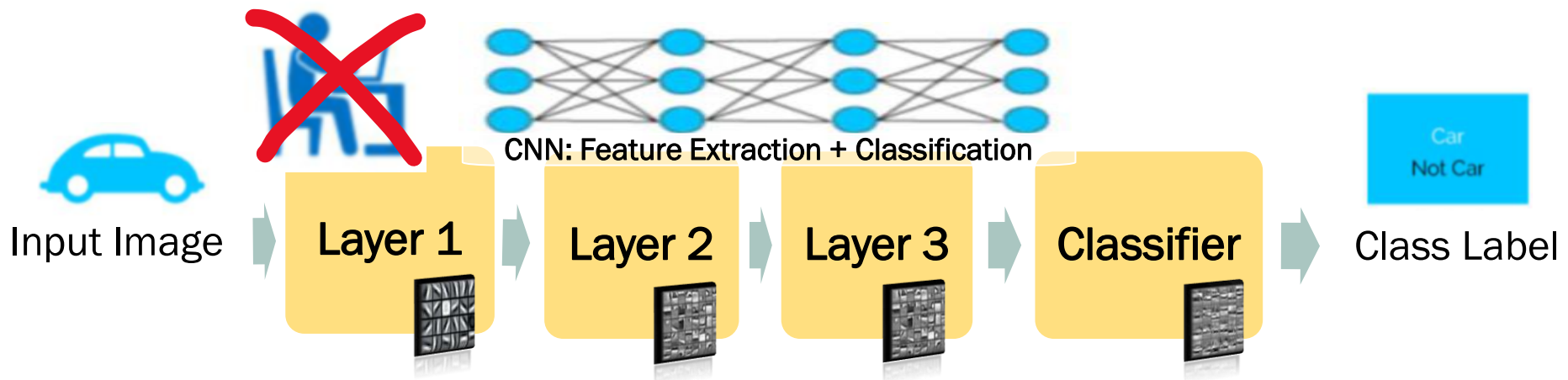


➔ First Learning 'from Nature' ➔ Then learning with 'Help of Humans' ('Human in the loop') ➔ Then...?!

➤ Traditional Approach for Machine Learning:

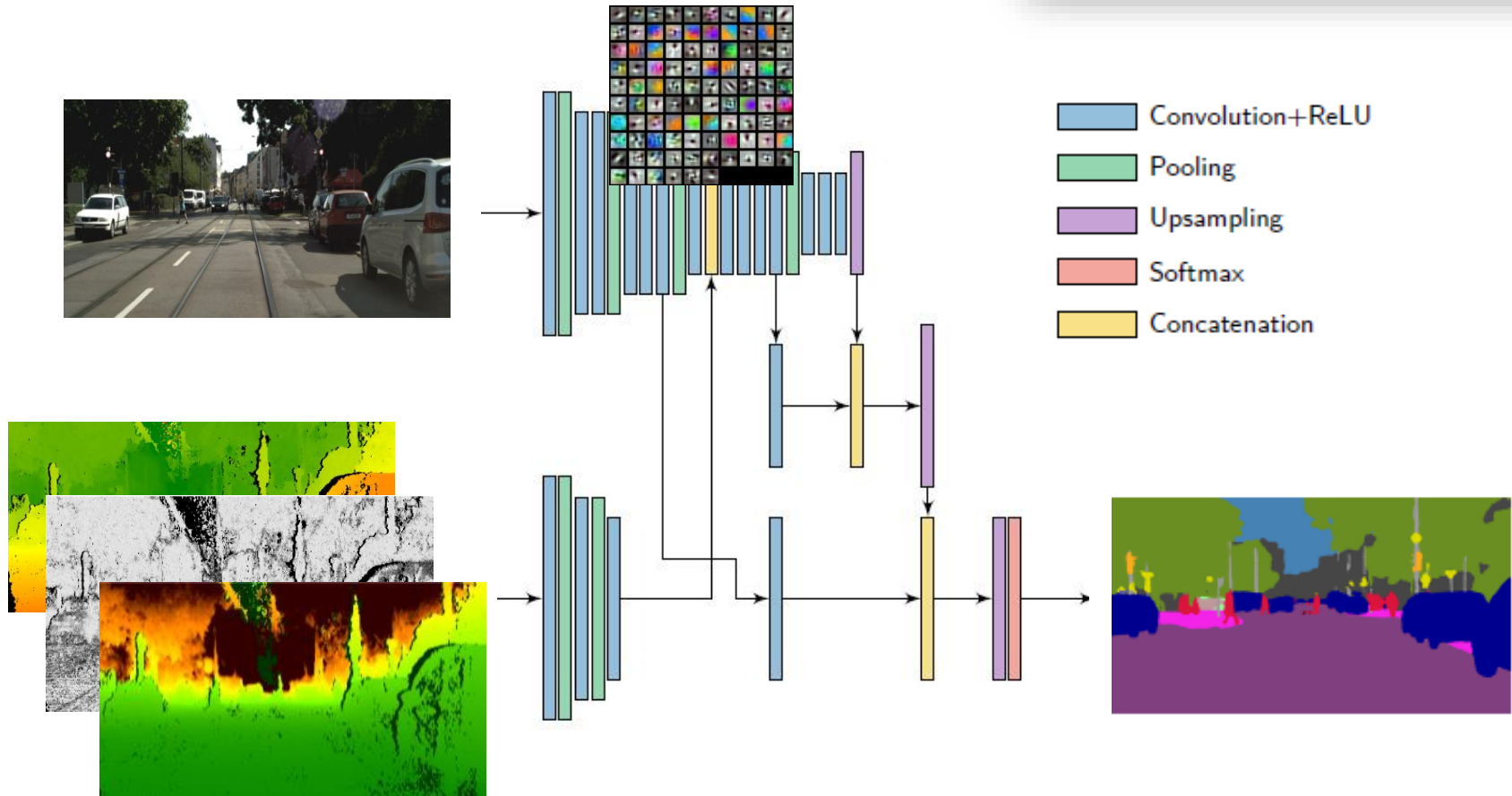


➤ NEW STAGE of AI and Deep Learning → CHANGING our WORLD:



➔ Humans not needed anymore? ➔ 'Human out of the loop'?

- Back to the Problem?
 - Use of 3d (Disparity), its Confidence, Height over Ground, and Middle Fusion



➤ Back to the Problem?

- Use of 3d (Disparity), its Confidence, Height over Ground, and Middle Fusion



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Benz
The best or nothing.



- ➔ Learning like humans to solve the problem!
- ➔ BUT human creativity (heuristics for topology) is used!
- ➔ Humans not 'out of the loop' ...STILL?!

➤ Practical Results and Relevance



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The best or nothing.



- Already included in Daimler Test Car - Direct way to come to product!
- Remember when you buy the next Mercedes
- Prize Jury tested it!
- **We won the Otto Johanssen Prize!**

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FESTO



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NEURA
ROBOTICS



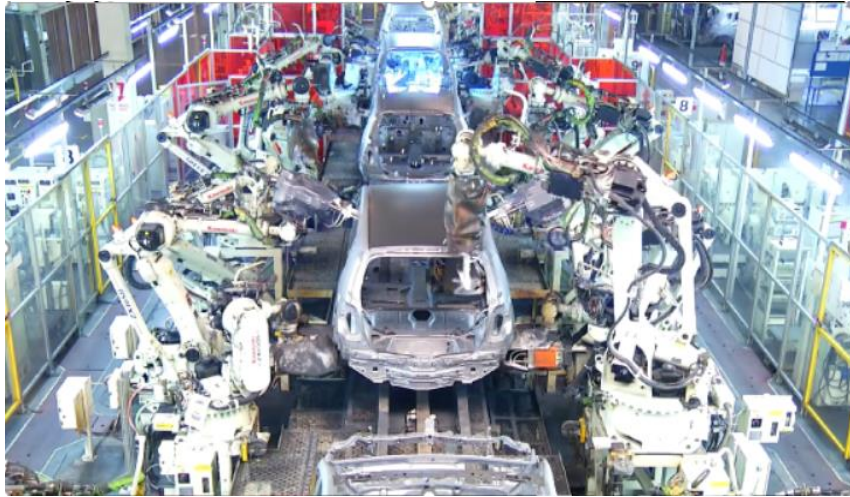
BINGO

—

Bionic Intelligence based Gripper for Unknown Objects



➤ Next Industrial Revolution



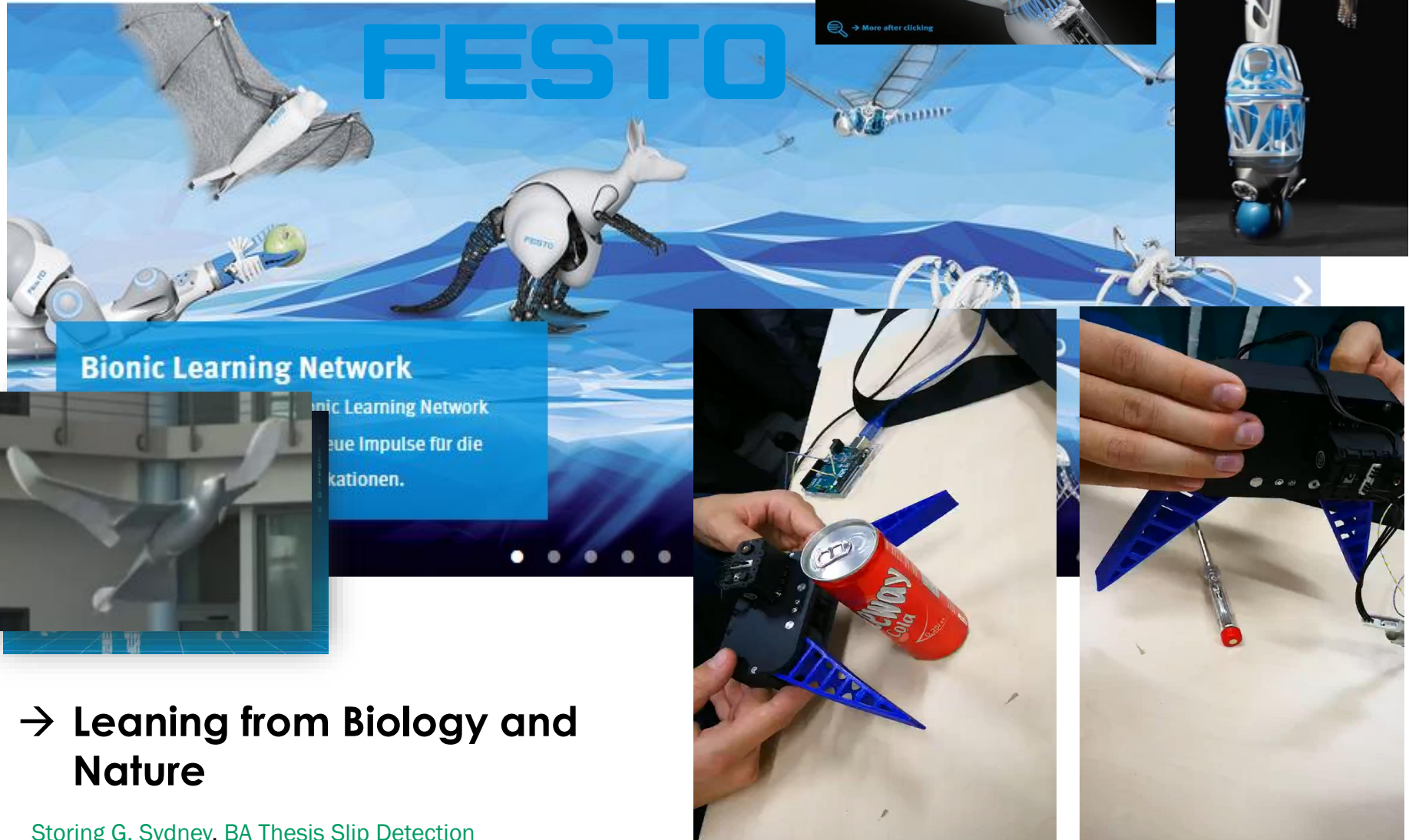
Industrial Robots – highly automated but with weak intelligence (ANI)



Collaborative Robots (CoBots) – flexible with general intelligence (AGI)

- **CoBots** enable the **next Industrial Revolution!**
- Robots that **cooperate with people in all areas of work and life!**
- Natural and intuitive handling functions are a major challenge!

➤ BI - Bionic Intelligence



➤ BI - Bionic Intelligence



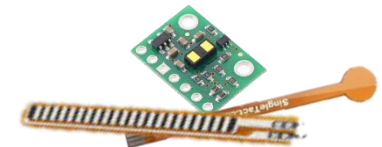
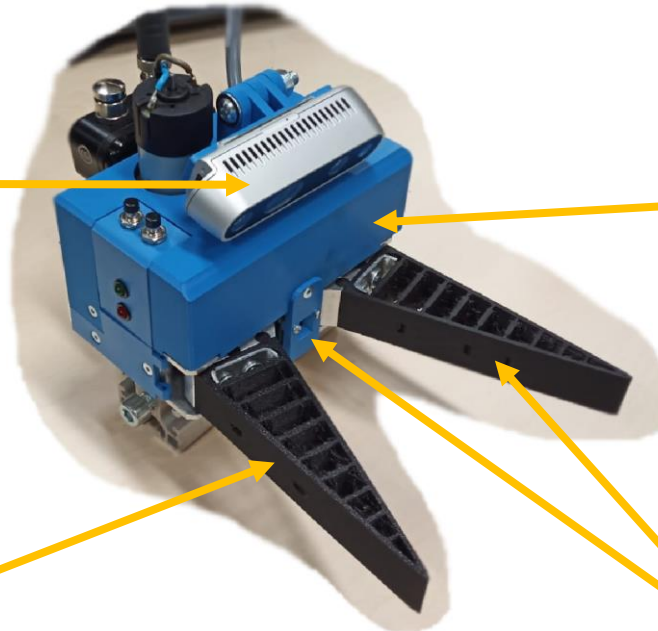
Stereo-Vision or
monokular vSLAM Sensor



Device



Bionic Endeffectors

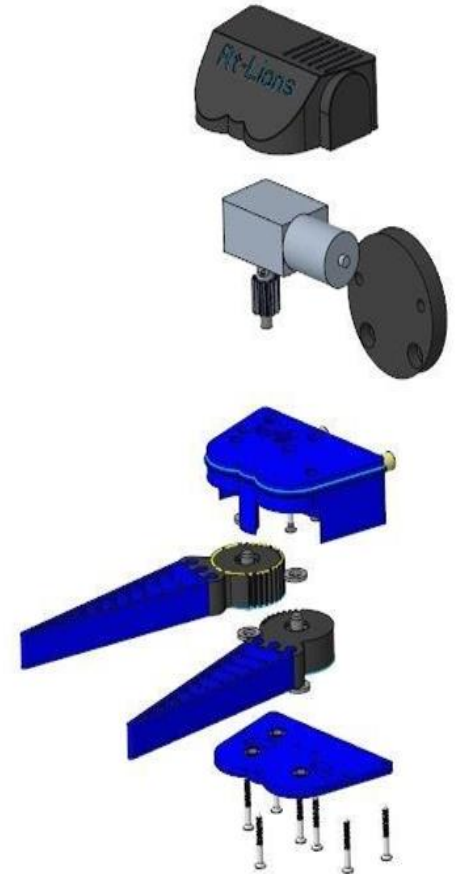
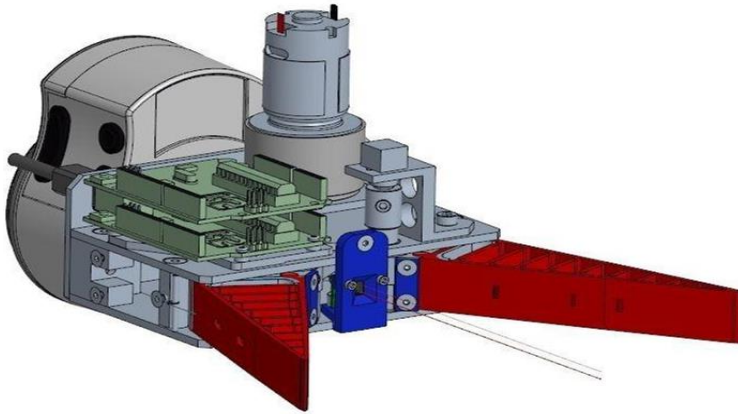


Sensors:

- SingleTact (PPS, I2C, 10N, <1.0%)
- FlexSensor SENS90
- ToF Sensor VL53L1X
- 9-DoF IMU Adafruit BNO55
- Servo Torque Feedback
- ...

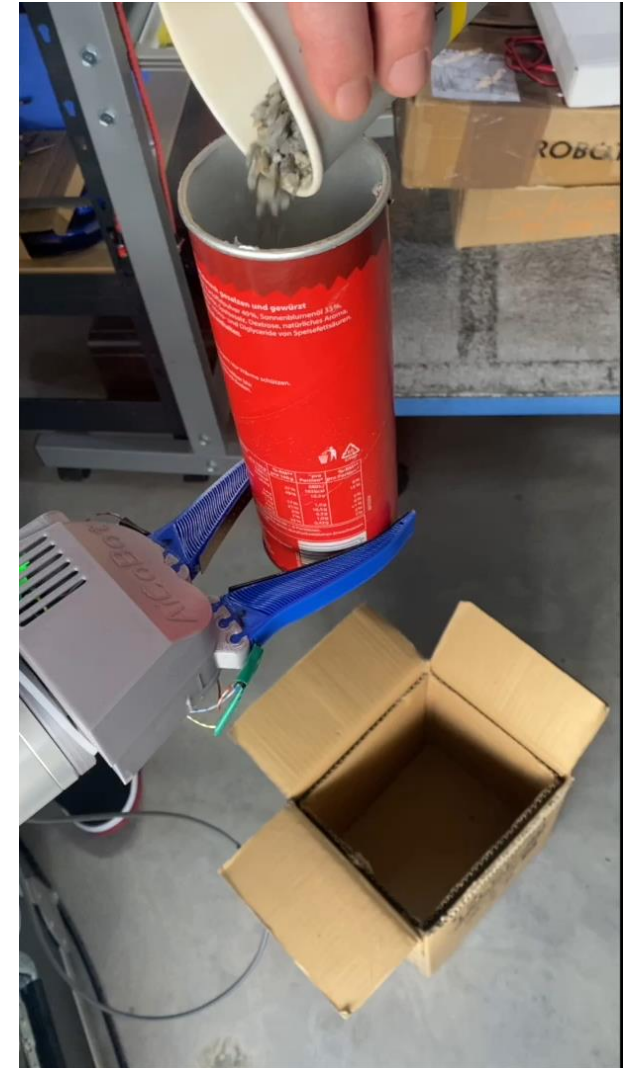
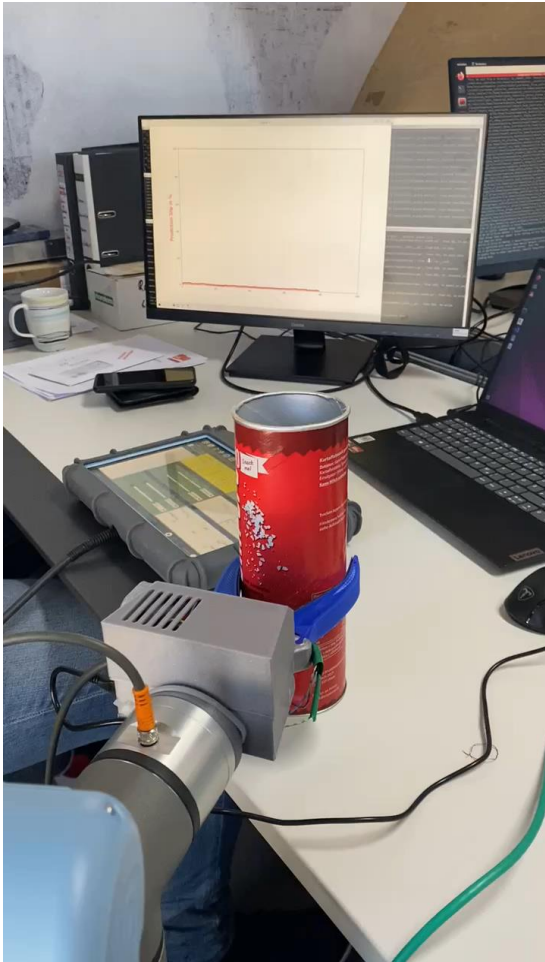
→ Deep Learning on Edge-AI Device for Grasping Point Detection,
Successful Grasping Detection, and Slip Detection

➤ BI - Bionic Intelligence



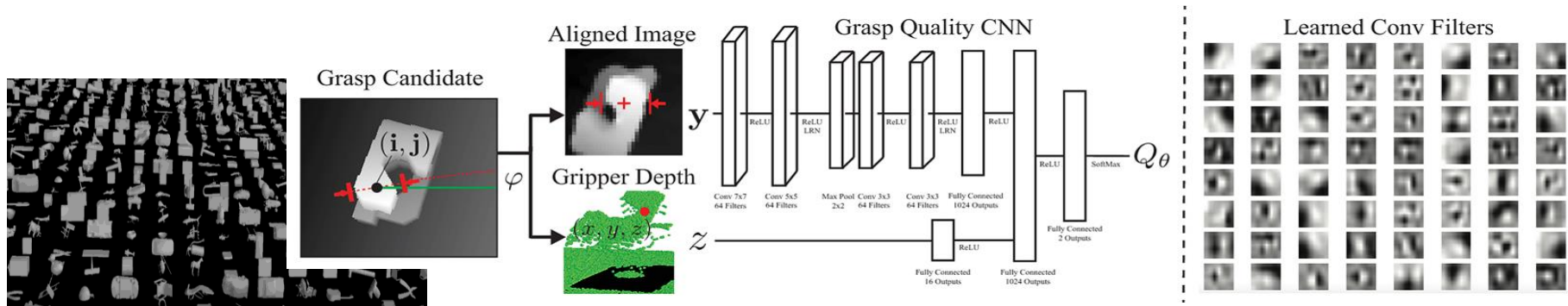
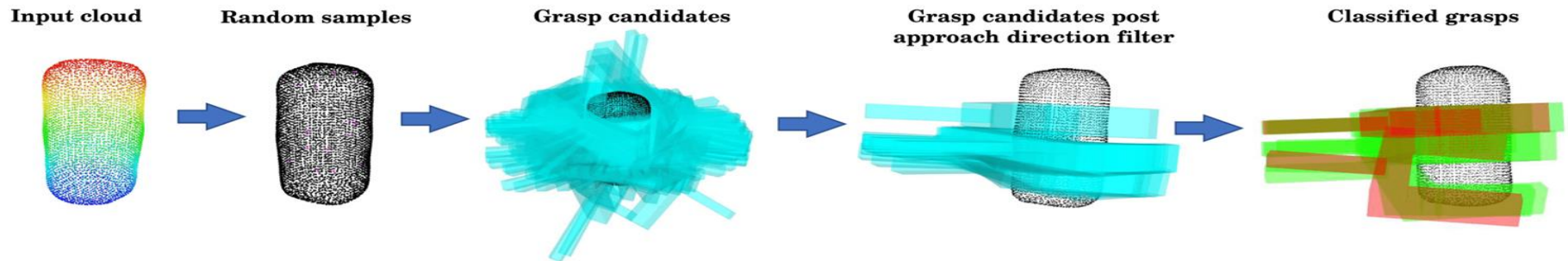
→ Different Versions

➤ BI - Bionic Intelligence



→ Deep Learning on Edge-AI Device for Slip Detection with **real-time controlling system** for torque and grip force

➤ Innovation - Grip candidates from 3D geometry and evaluation via CNN



→ State-of-the-art grip point determination systems such as DexNet or the GPD-Library are surpassed!



Master's Thesis:

Machine Learning based Perception for Robotic Manipulation

Name : Atmaraaj Gopal
Matr. Nr. : 753037
Submission : Summer Semester 2021

Advisors

Internal : Prof. Dr. rer. nat. Matthias Rättsch, Reutlingen University
External : Dr.-Ing Milad Malekzadeh, Neura Robotics GmbH (Metzingen)
Rohit Menon, M. Sc., Neura Robotics GmbH (Metzingen)



→ **World's first COGNITIVE robot!**

→ **Intelligent gripping** without rigid programming language through
natural verbal and gesture-based communication!

➤ Teachable Machine

The image displays the Teachable Machine web interface. On the left, the 'Teachable Machine' header is visible. Below it, there are two sections for training: 'YES' with 63 Bild-Beispiele and 'NO' with 87 Bild-Beispiele. Each section has a 'Webcam' button and a 'Hochladen' button. A 'Klasse hinzufügen' button is at the bottom. In the center, the 'Training' panel shows 'Modell ist trainiert', 'Erweitert' settings (Epochen: 50, Batchgröße: 16, Lernrate: 0.001), and a 'Details' button. On the right, there are two preview panels. The 'Vorschau' panel shows a hand giving a thumbs up, with 'Eingabe' set to 'Webcam' and 'Ausgabe' showing 'YES' and 'NO' options. The 'Preview this model live' panel shows a hand giving a thumbs down, with 'Input' set to 'Webcam' and 'Output' showing 'YES' and 'NO' options. Three QR codes are overlaid on the interface, each with a 'SCAN ME' label. One QR code is in the top center, another in the top right, and a third in the bottom center.

→ NO programming skills! DONE in 5min!

→ GIVE IT A TRY!!

→ Export and share!

➤ Teachable Machine

The image displays the Teachable Machine web interface. On the left, the 'Training' screen shows three gesture classes: 'I' (267 examples), 'LOVE' (209 examples), and 'U' (212 examples). Each class has a 'Webcam' button and a 'Hochladen' (Upload) button. In the center, the 'Training' panel shows 'Modell ist trainiert' (Model is trained) and settings for 'Erweitert' (Advanced): 'Epochen: 50', 'Batchgröße: 16', and 'Lernrate: 0,001'. On the right, the 'Vorschau' (Preview) screen shows a hand making the 'I' gesture, with the 'Ausgabe' (Output) bar for 'I' at 100%. A 'SCAN ME' QR code is overlaid on the top right of the preview screen. Below the QR code, a 'Preview this model' window shows the 'Input' as 'Webcam' and the 'Output' as 'I' with a 95% confidence score.

→ Also for multi-class problems!

→ **GIVE IT A TRY!!**

→ Export and share!

➤ Teachable Machine

The image displays the Teachable Machine web interface. On the left, there are two sections for training: 'Right' with 145 image examples and 'Left' with 340 image examples. Each section has 'Webcam' and 'Hochladen' (Upload) buttons. Below these is a dashed box with the text 'Klasse hinzufügen' (Add class). In the center, a 'Training' panel shows 'Modell ist trainiert' (Model is trained) and an 'Erweitert' (Advanced) dropdown. On the right, there are two preview panels. The top one is labeled 'Vorschau' (Preview) and 'Modell exportieren' (Export model). It shows a hand gesture being recognized, with 'Eingabe' (Input) set to 'Webcam' and 'Logi C270 HD WebCam' selected. The 'Ausgabe' (Output) section shows 'Right' at 100% and 'Left' at 99%. The bottom preview panel is labeled 'Previ' and shows the same hand gesture with 'Input' set to 'Webcam' and 'Logi C270 HD WebCam' selected. The 'Output' section shows 'Right' at 100% and 'Left' at 99%.

Teachable Machine

Right

145 Bild-Beispiele

Webcam Hochladen

Left

340 Bild-Beispiele

Webcam Hochladen

Klasse hinzufügen

Training

Modell ist trainiert

Erweitert

Vorschau Modell exportieren

Eingabe ☐ AN Webcam

Logi C270 HD WebCam

Ausgabe

Right 100%

Left 99%

Previ

Input ☐ ON Webcam

Logi C270 HD WebCam

Output

Right 100%

Left 99%

→ Control a robot by gestures?

→ **GIVE IT A TRY!!**

→ Export and share!

➤ Teachable Machine

Teachable Machine

Preview this model live

Input ☐ ON Webcam

Switch Webcam

Output

YES 95%

NO

Teachable Machine

Preview this model live

Input ☐ ON Webcam

Switch Webcam

Output

YES 98%

NO

Teachable Machine

Preview this model live

Input ☐ ON Webcam

Switch Webcam

Output

LOVE 98%

U

Teachable Machine

Preview this model live

Input ☐ ON Webcam

Switch Webcam

Output

LOVE 96%

U

Teachable Machine

Preview this model live

Input ☐ ON Webcam

Switch Webcam

Output

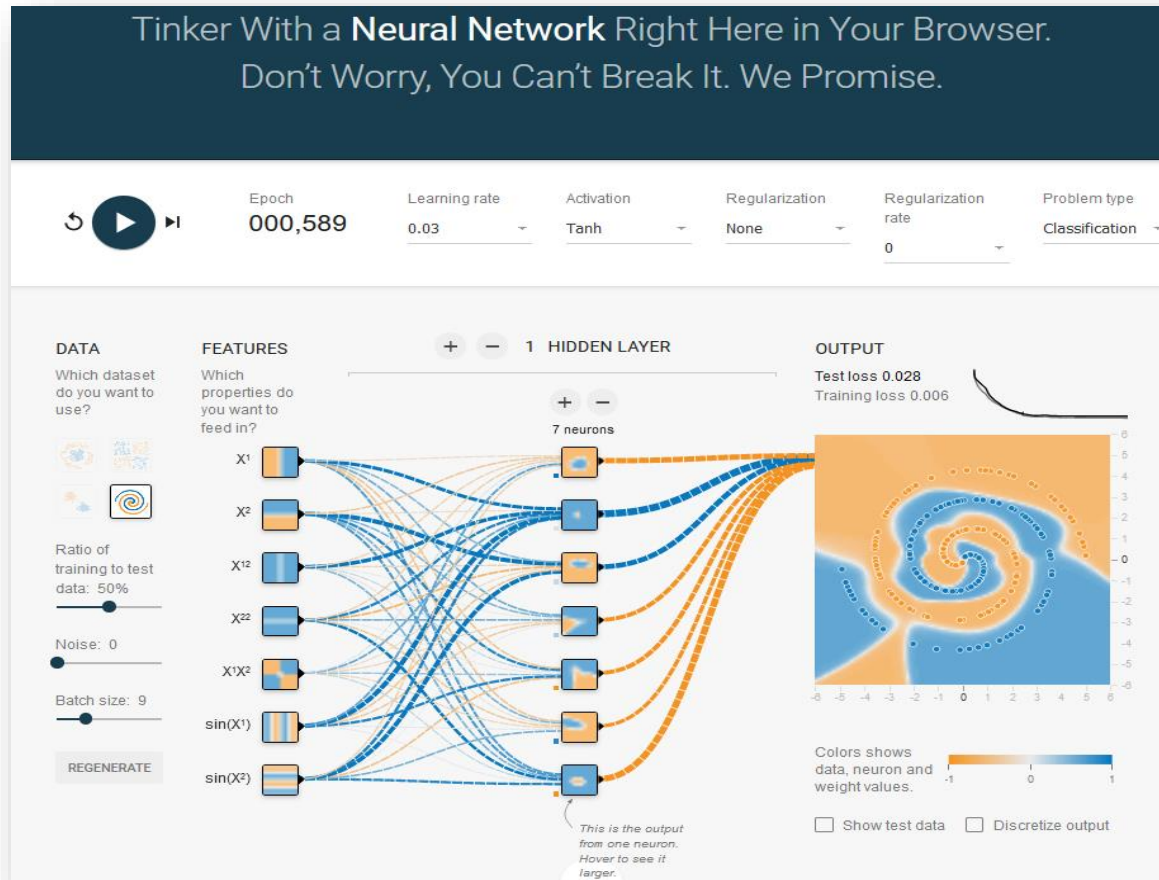
LOVE 90%

U

➔ No training on Android/iPhone!
But can be shared!

➔ **GIVE IT A TRY!!**

➤ CNN Playground



SCAN ME



SCAN ME



→ Don't worry, you can't break it! They promise 😊👍!

→ **GIVE IT A TRY!!**

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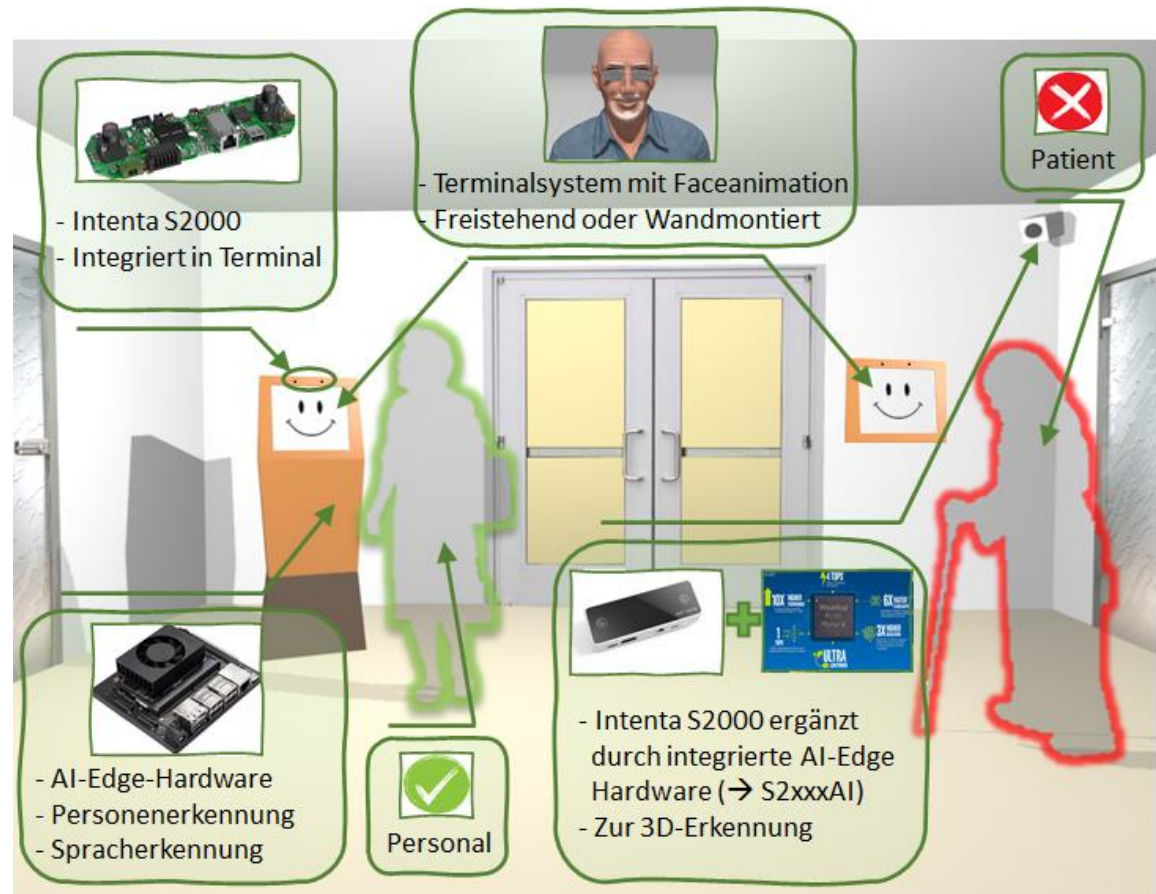


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➤ ValAIntin - Virtual Interaction for Avoidance of Disappearing of Pensioners in Shared Living based on Edge-AI and ChatGPT



Innovations:

- Face Animation, Text to Speech, Speech to Text wrapper to GPT
- Language and Emotion Detection, Modelling, and Animation

Emotional ChatGPT-Bot → Artificial Moral Advisor?

- 2022 Large Language Models (LLMs) like GPT (OpenAI/MS), LaMDA (Google), LLaMA (Meta), ERNIE (Baidu) are ruling the world!
- Based on BIG data, Transformers (Attention), Reinforcement Learning, and ENORMOUS Computational Power



The GPT-3 model used in the experiment appears to be an older sibling of the most recent ChatGPT bot that has become a controversial topic among educators and those who work in the field of AI. ChatGPT, the newest version, "is fine-tuned from a model in the GPT-3.5 series," according to OpenAI's [website](#).

The bot is also "remarkably good at modifying its answers in response to human hints," he concluded.

While Chat GPT3's results were impressive, Terwiesch noted that Chat GPT3 "at times makes surprising mistakes in relatively simple calculations at the level of 6th grade Math."

Professor Christian Terwiesch, who authored the [research paper](#) "Would Chat GPT3 Get a Wharton MBA? A Prediction Based on Its Performance in the Operations Management Course," said that the bot scored between a B- and B on the exam.

→ After CNNs it is the next STAGE of AI to CHANGE our WORLD!

Emotional ChatGPT-Bot → Artificial Moral Advisor?

ChatGPT

Chatbot built by OpenAI



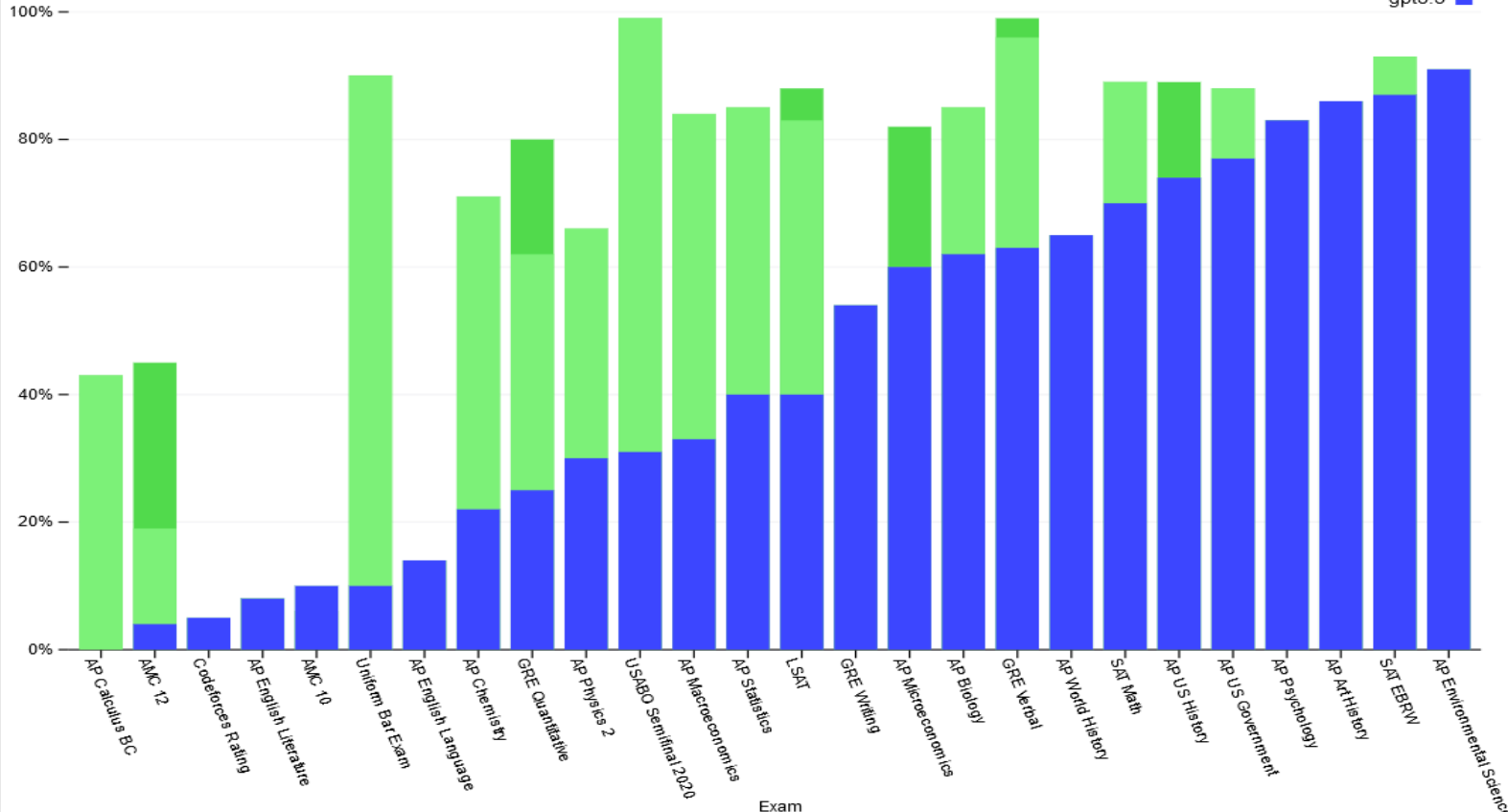
ChatGPT is a chatbot developed by OpenAI and launched in November 2022. It is built on top of OpenAI's GPT-3 family of large language models and has been fine-tuned using both supervised and reinforce...



➤ ChatGPT is parsing exams of many UNIs

Exam results (ordered by GPT-3.5 performance)

Estimated percentile lower bound (among test takers)



Initial release November 30, 2022
Type Chatbot

→ What can better test to pass the Turing Test?

→ Does ChatGPT has Artificial SUPER-Intelligence (ASI)?

Emotional ChatGPT-Bot → Artificial Moral Advisor?

➤ What is ChatGPT answering being asked to be superintelligent?

The screenshot displays the ChatGPT web interface. At the top, a teal banner reads 'ChatGPT Chatbot built by OpenAI' with the OpenAI logo. Below this, a brief description states: 'ChatGPT is a chatbot developed by OpenAI and launched in November 2022. It is built on top of OpenAI's GPT-3 family of large language models and has been fine-tuned using both supervised and reinforce...'. A table provides details: Developer(s) OpenAI, Initial release November 30, 2022, Stable release January 30, 2023, Type Chatbot, License Proprietary.

The main chat area shows a conversation with 'Default (GPT-3.5)'. The user asks: 'Are you an artificial superintelligence?'. The response is: 'No, I am not an artificial superintelligence. I am based on OpenAI's GPT-3.5 architecture, which is an example of artificial general intelligence (AGI) at best. Here's the distinction:'. The response is followed by a list of three points:

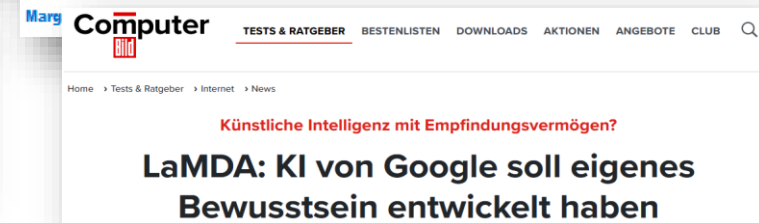
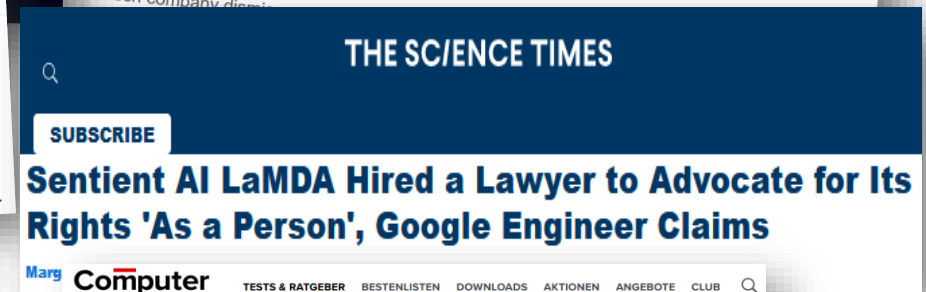
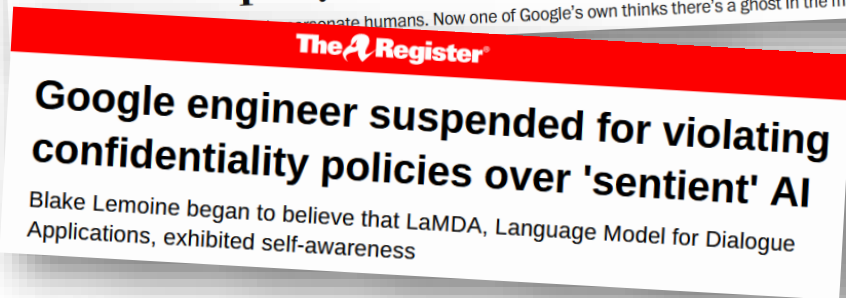
1. **Artificial Narrow Intelligence (ANI):** This is where AI can perform a specific task as well as, or better than, humans but only that specific task. Examples include chess-playing programs or image recognition systems.
2. **Artificial General Intelligence (AGI):** This is an AI system that can perform any intellectual task that a human being can. It's a more flexible, multifaceted system. While GPT-4 exhibits behaviors akin to AGI in many respects because of its ability to perform a wide range of tasks across different domains, it's still fundamentally different from human cognition. GPT-4 doesn't "understand" concepts or "think" in the way humans do; it generates responses based on patterns in the data on which it was trained.
3. **Artificial Superintelligence (ASI):** This represents an AI that surpasses human intelligence across all fields, from scientific creativity and general wisdom to social skills. It's an entity that would outperform the best human brains in practically every field, and its creation is a topic of significant debate and concern due to the potential risks associated with it.

The response concludes with: 'I am essentially a very sophisticated pattern matcher, able to generate human-like text based on vast amounts of data but without consciousness, emotions, or true understanding.'

→ ChatGPT behaves like an Artificial General Intelligence (AGI)!

→ For Superintelligence emotional skills, self-awareness, and consciousness is missing! Still missing?

➤ LaMDA has own Ideas, Emotions and is Conscious?



Blake Lemoine, talking with LaMDA (Language Models for Dialog Applications), as part of his job on Google's Responsible AI team, testing for discriminatory or hate speech.

- Is EMOTION more as 'a state'?
- Fight to be accepted 'as a person'?
- When do they have (self) consciousness?



➤ **ValAIntin - Virtual Interaction for Avoidance of Disappearing of Pensioners in Shared Living based on Edge-AI and ChatGPT**



- ValAIntin becomes autonomously 'emotional' and changes language
- Ready being an 'Artificial Moral Advisor/Agent' (AMA) and for 'Automated Decision Making' (ADM)?

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→ Acceptation of AI?

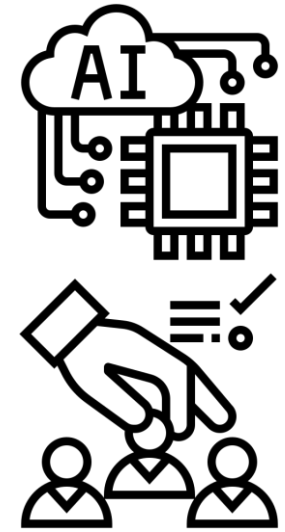
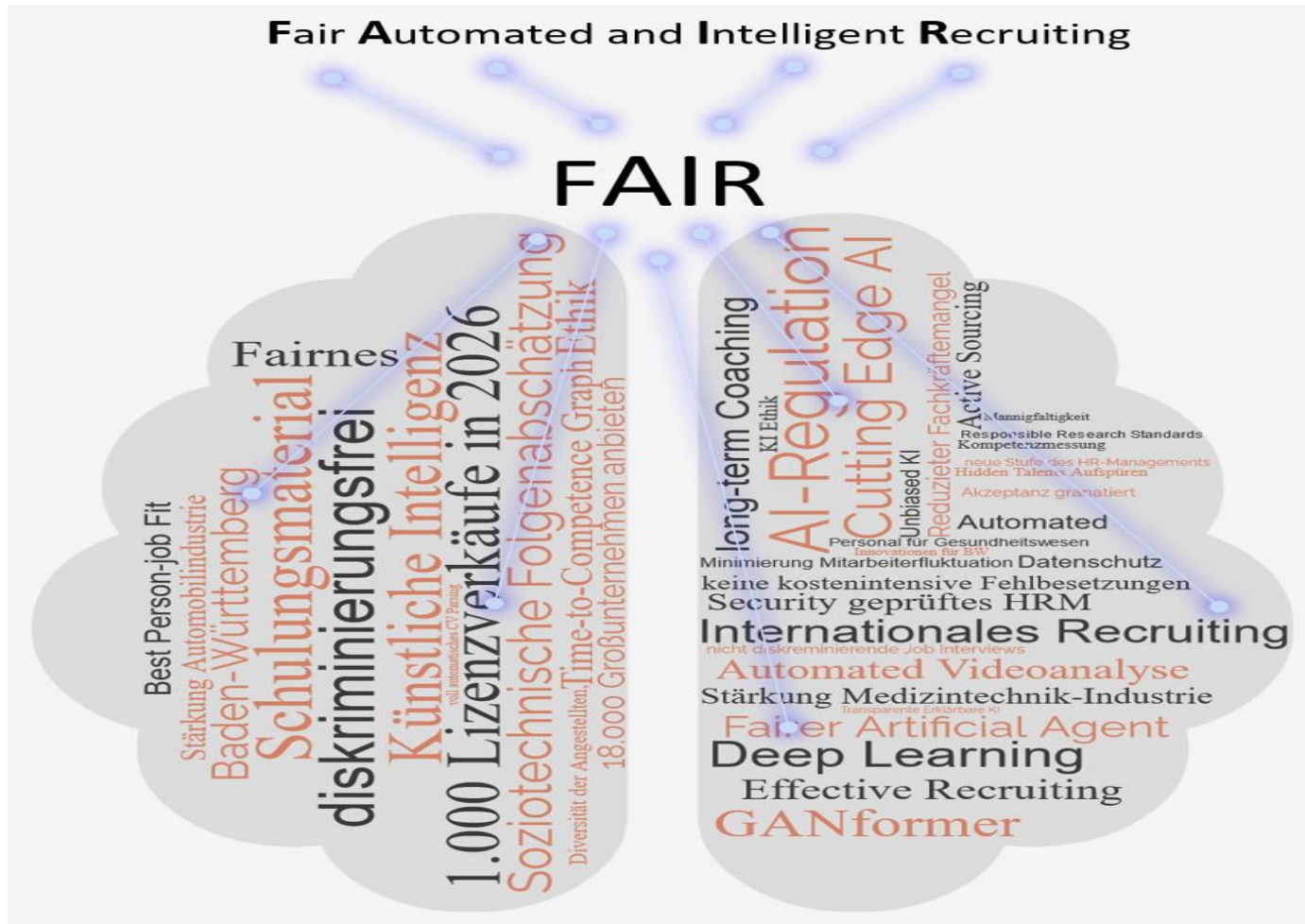
strong machine problem
chatbots chat alignment
attention agi **ai** transformer
gan ethics **gpt** great
learning nlp super
transfer

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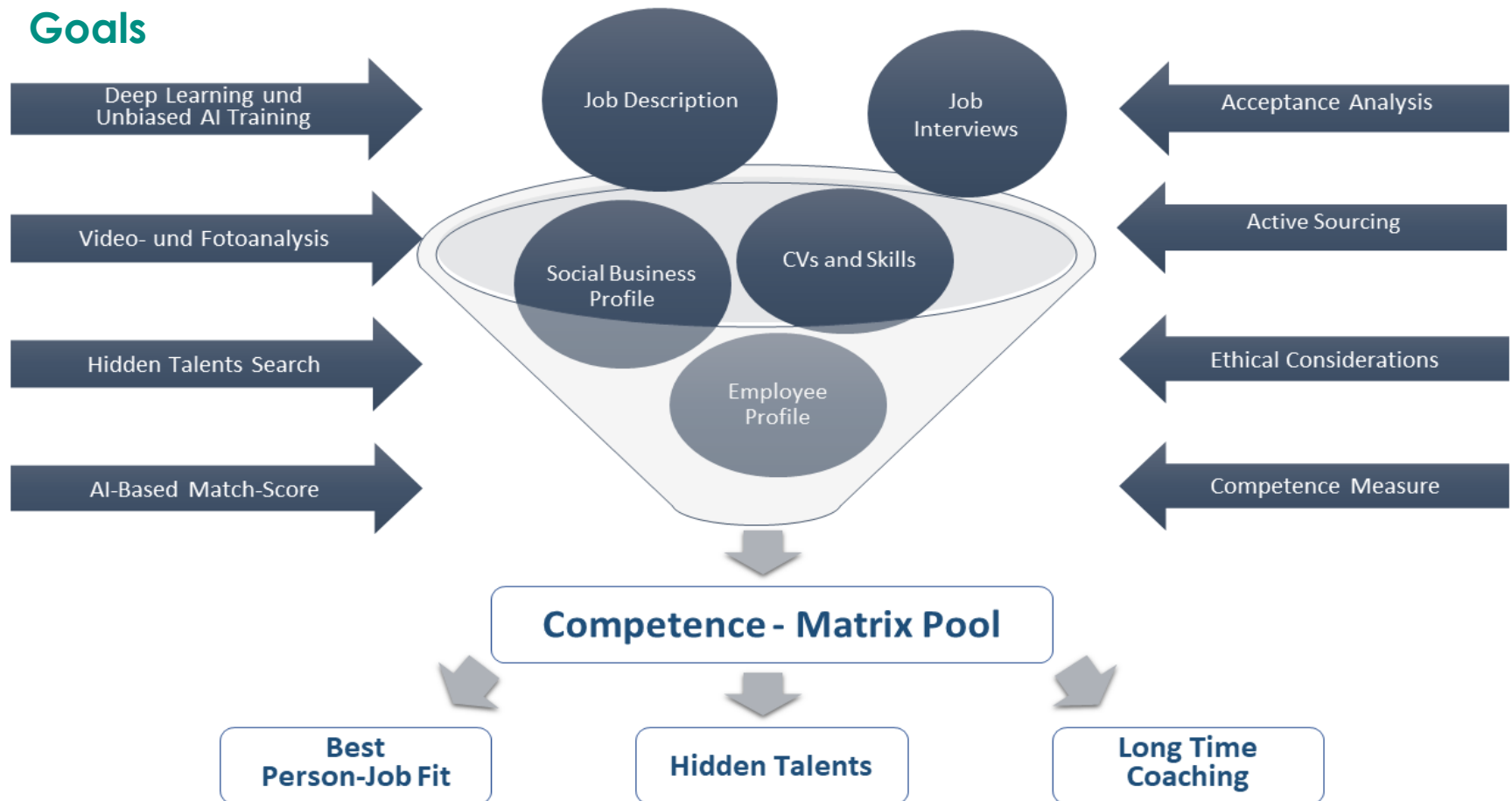
Prof. Matthias Rätsch

Head of the Interactive and Mobile Robotics
Group and of the RoboCup Team RT-Lions
Reutlingen University, Germany
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- High develop nations, like Germany or Japan, have BIG problem that candidates for qualified jobs are rare.
- Need of 'ACTIVE Sourcing' and to integrate AI in AUTOMATED recruiting
- to reach...

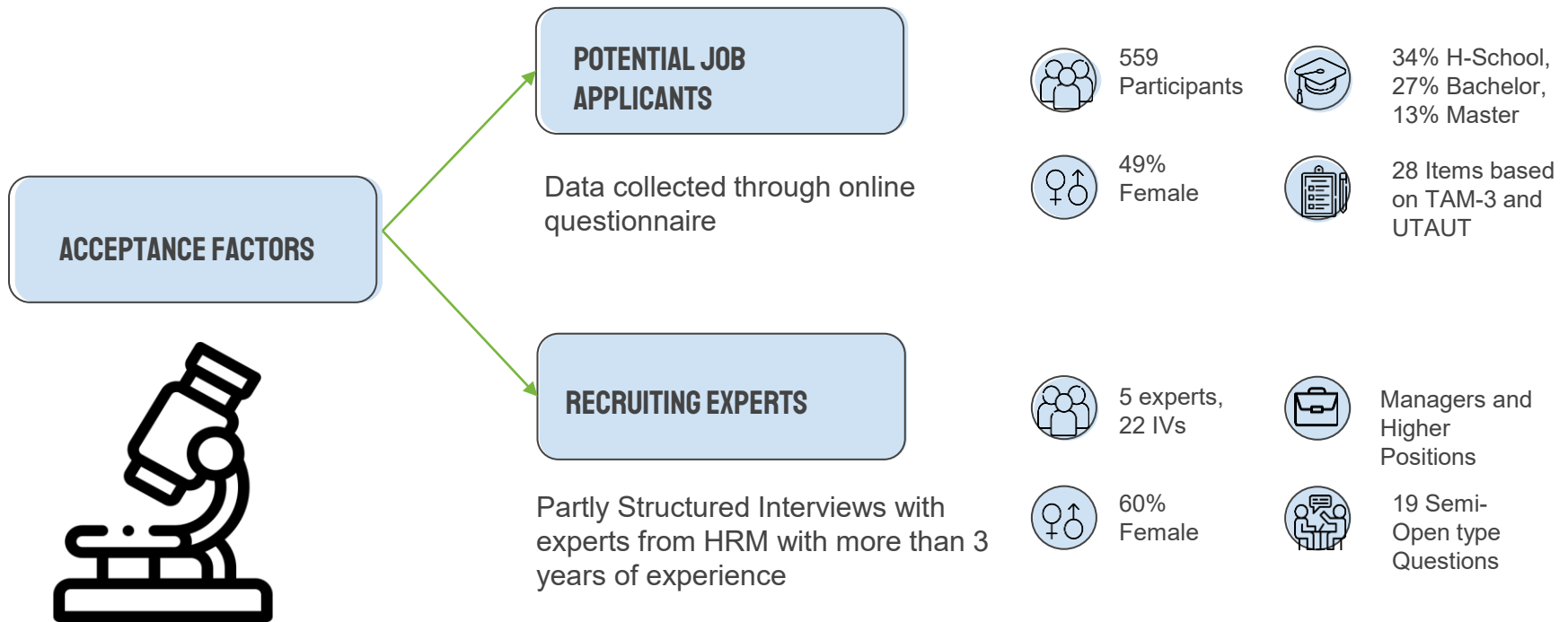
➤ Goals



- Cooperation with partners from industry and from the field of AI-Ethics
- Data Protection, Non-discriminating Decisions, AND...
- All is WITHOUT ANY SENSE, if NOT ACCEPTED by the users! Therefore, we did...

➤ Acceptance Analysis Study 2021

➤ Methodology



→ What came out?

➤ Acceptance Analysis Study 2021

➤ Results - Questionnaire

51%

AI PRIOR KNOWLEDGE

... of participants have **no** prior experience with AI Intelligence
(19% neutral)

45%

FEAR OF AI

... of participants are **not** afraid of AI

11%

TASK RELEVANCE

... of participants think that AI is capable to conduct video interviews

72%

OUTCOMES QUALITY

... of participants think that if AI would evaluate them during the process, they would be evaluated less positive

7%

OUTCOMES TRANSPARENCY

... of participants are **not** worried about transparency if AI is guiding recruiting process

91%

EXTERN CONTROL

... of participants think that there has to be human contact person at disposal during the process guided by AI

→ But we want more...

➤ Current Study

- Improvements - Current study compared to the previous

METHODOLOGY IMPROVEMENTS

Procedure is methodologically improved as we can analyze and compare results on a deeper level

IMPROVED QUESTIONNAIRE

12 Additional questions that should improve factorial value of the questionnaire

ADDITIONAL VARIABLES

Additional variables that should offer us deeper insight

EFFECT OF TIME

In the time period of more than 2 years, many factors impacting AI and technology acceptance occurred (ChatGPT)

→ **We extended, also to other countries, to see influence of culture.**

→ **BUT WE NEED MORE! NOW IT IS YOUR TURN!!!!**



➤ Current study

- Takes only 5 minutes!
- SCAN Code and START NOW!!!!

<https://hsrtumfrage.reutlingen-university.de>



Acceptance of Artificial Intelligence

This survey was designed to measure the acceptance of artificial intelligence in the application process. AI is the term used to describe algorithms that can learn and adapt autonomously. In the recruitment process, AI can be used, for example, to assess resumes and cover letters or for telephone or video interviews. The survey should give us an indication of which aspects of the use of AI are important to users. The results will be used to improve the quality of the user experience for further AI systems. In the following questions, we expect you to indicate how strongly you agree or disagree with the given statements. The possible answer scale includes values from 1 to 7. The value 1 stands for the answer I strongly disagree with the given statement, while the corresponding value 7 stands for the answer I strongly agree with the given statement.

这项调查旨在衡量申请过程中对人工智能的接受程度。人工智能是用来描述能够自主学习并适应的算法。在招聘过程中，人工智能可以用来评估简历和求职信，或用于电话或视频面试。该调查应使我们了解使用人工智能的哪些方面对用户很重要。调查结果将被用于提高进一步的人工智能系统的用户体验质量。在下面的问题中，我们期望您对所给陈述的同意或不同意程度。可能的答案范围包括从1到7的数值。值1代表我非常不同意给定的陈述，而相应的值7代表我非常同意给定的陈述。

***Do you work in the area of Human Resources Management?**
只干人力资源管理部门?

Choose one of the following answers

☐ Yes (是)

☐ No (没有)

***Are you planning to apply for a new job in the near future?**
你计划在近期申请新的工作?

Choose one of the following answers

☐ Yes (是)

☐ No (没有)

☐ Maybe, I am not sure (或许, 我不确定)

The use of AI in the recruitment process would improve my chances of getting the job
在招聘过程中使用人工智能会提高我获得工作的机会, 您是怎么想的?

1 - Strongly disagree (极其不同意)	2 - Disagree (不同意)	3 - Slightly disagree (稍不同意)	4 - Ambiguous (模棱两可)	5 - Slightly agree (稍同意)	6 - Agree (比较同意)	7 - Strongly agree (极其同意)	No answer
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

I think AI can be very useful for the recruitment process
我认为人工智能可以对招聘过程非常有用

1 - Strongly disagree (极其不同意)	2 - Disagree (不同意)	3 - Slightly disagree (稍不同意)	4 - Ambiguous (模棱两可)	5 - Slightly agree (稍同意)	6 - Agree (比较同意)	7 - Strongly agree (极其同意)	No answer
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➔ MAKE THE WORLD BETTER!

Artificial Super Intelligence

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Super Intelligence - The End or the Last Hope? - Conclusion

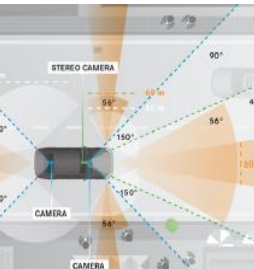
➤ AI Highlights:

- 1996: IBM Deep Blue beats Garry Kasparov in **Chess**
- 2011: IBM Watson wins **1Mill \$ quiz program Jeopardy!**
- 2017: Google DeepMind **Alpha-Go** beats Lee Sedol in **Go**
- 2019: Google DeepMind **Alpha-Star** beats Humans in 'Starcraft II' 10:0
- 2022: OpenAI ChatGPT 3, 3.5, 4.0

→ **Risk for End of:** Driving? Work? Jobs? Own Decisions? Control?

→ **Hope to Solve World Problems:** Terminal illness? Nuclear Disasters? Population Aging? Discrimination?

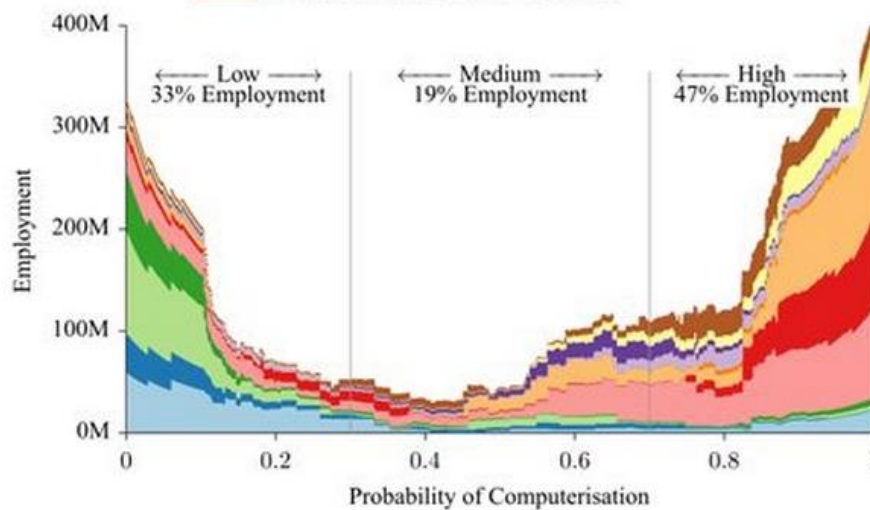
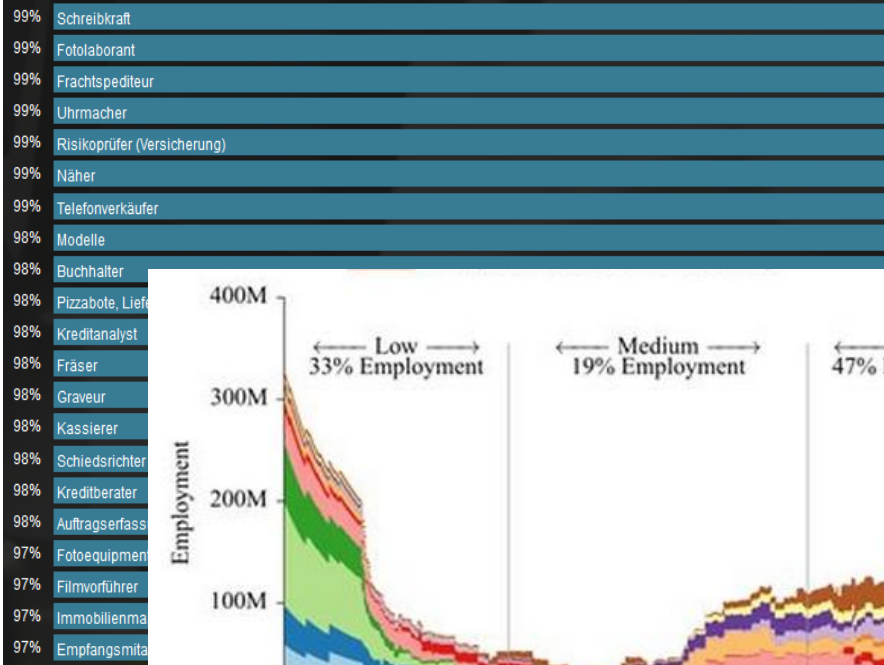
→ **Make BETTER Decisions for our World?**



- AI will change all!
- Will it take over YOUR job?

20 Jobs, die am meisten von Automatisierung bedroht sind

Studie: THE FUTURE OF EMPLOYMENT: HOW SUSCEPTIBLE ARE JOBS TO COMPUTERISATION?



Will Digital Technologies Change Your Job?

Robots will take on your job and you are out? It is not quite that simple. Indeed, occupations rarely disappear, but they do change. Some tasks are automated; others continue to be performed by humans, even if they can be automated. New tasks are being added, most importantly to be able to deploy the new technologies.

Take advantage of the opportunities this change brings with it. Take courage.

Test now how digital technologies could change the world of work.

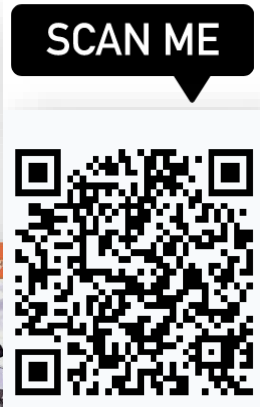
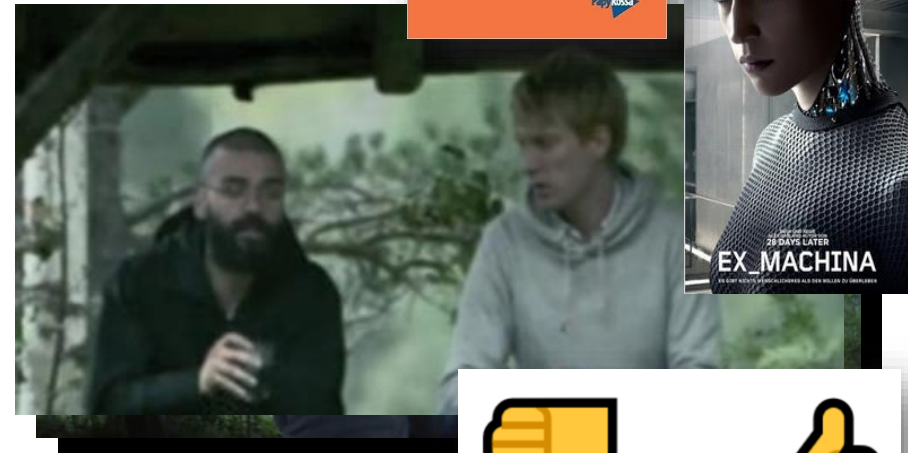
SCAN ME



➔ GIVE IT A TRY!!

➤ When will Superintelligence (Singularity, Transhumanism) come?

- **EX MACHINA:** “The arrival of a strong AI has been clear since decades. The variable is ‘WHEN’ not ‘IF’”
- **Ray Kurzweil:** 2045
- **Elon Musk:** 2025
- **T. Wagner** (avg. over many statistics):
 - I. < 2 %: it comes NEVER!
 - II. ~15 %: less than 15 or more than 30 years
 - III. > 80 %: 15 - 30 years !!

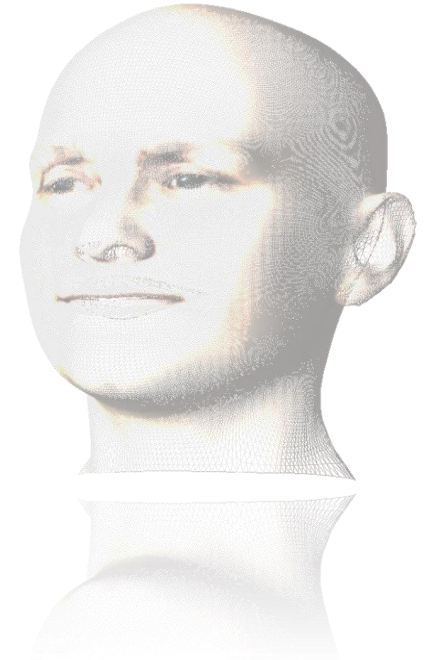


→ What do YOU think is true: I., II. or III.?!

→ Is Superintelligence the ‘End’ 🗨️ or ‘Last Hope’ 👍 ?



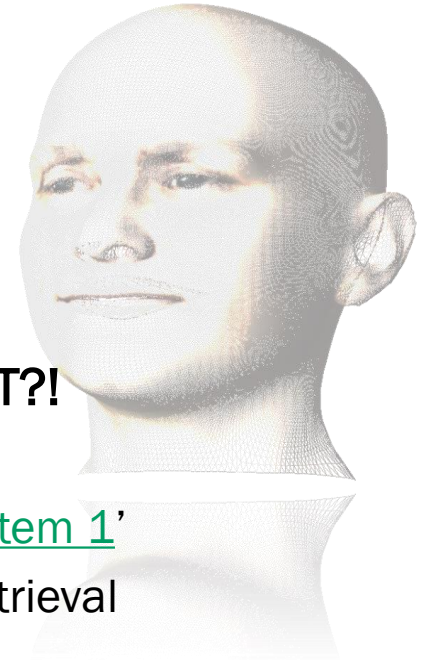
Thanks for your attention!
Questions?



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Thanks for your attention!
Questions? See MORE? Collaborate?



Do you want to learn more about AI and the use of ChatGPT?!

- *LLMs for Q&A Systems in the Terracotta Museum:*
 - Talk at **Fri. 10:50, room 27**, session '[Human-Machine System 1](#)'
 - **Title:** "TFCSG: An Unsupervised Approach for Question-Retrieval Over Multi-Task Learning"
- *ChatGPT in Dialogs for Mental Health:*
 - Talk at **Sat. 11:20, room 18**, session '[Social Systems](#)'
 - **Title:** "Advancing Mental Health Diagnostics: GPT-Based Method for Depression Detection"

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- ➔ Interested in Joint Research & Collaboration?
- ➔ See YOU next days at the talks or at the banquet or ... !
- ➔ Get in contact with my group!