

# Arbeit im Wandel: Das Zeitalter der Künstlichen Intelligenz



**UNIVERSITY  
OF TWENTE.**



# Über mich

I'm hiring!



**Dr. Joschka Hüllmann**

Assistant Professor an der Universität Twente (NL)

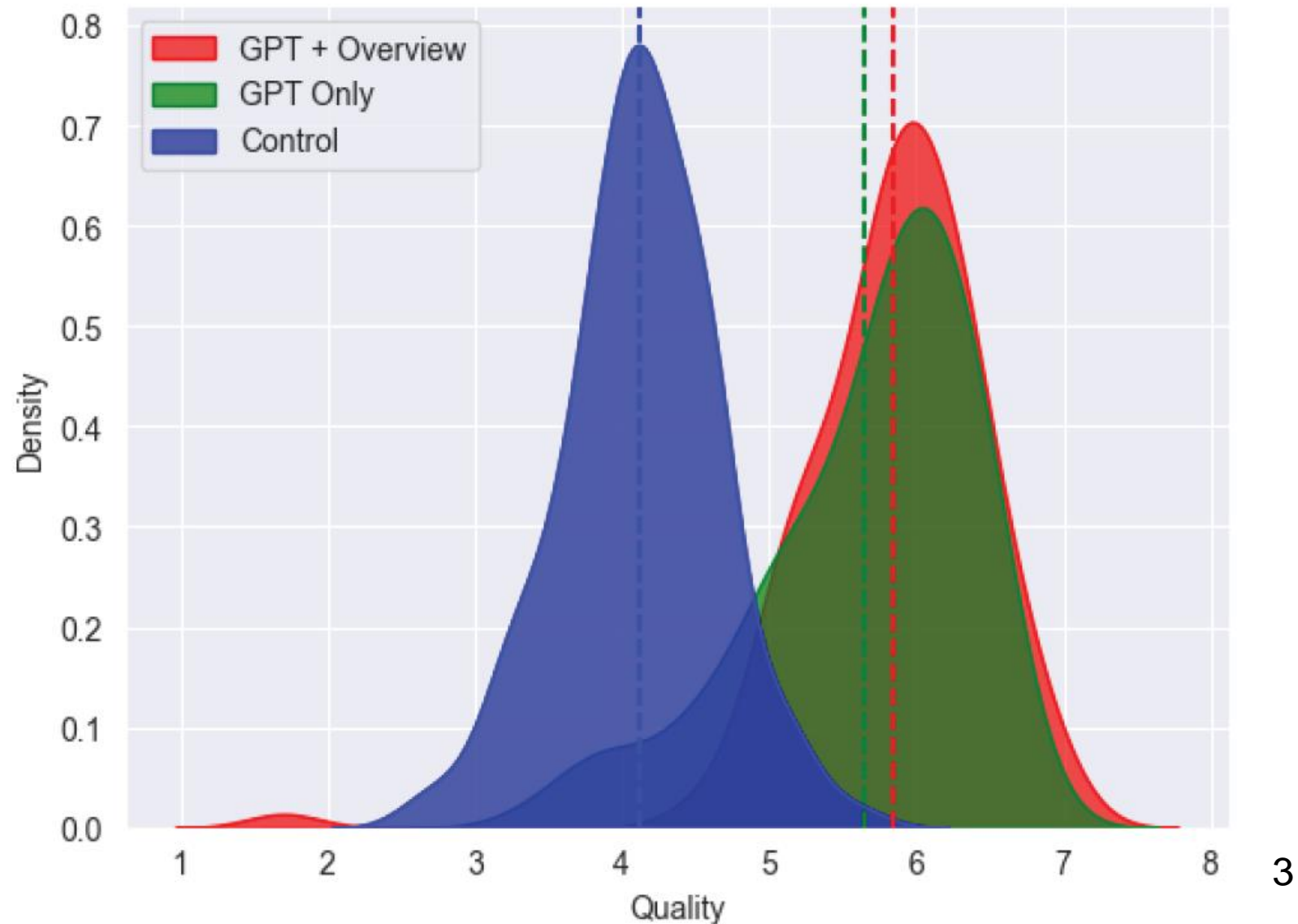
## **Forschungsschwerpunkte:**

- Die Zukunft der Arbeit mit neuen Technologien
- People Analytics und Algorithmisches Management
- Analyse Digitaler Fußspuren
- Social Process Mining

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# Produktivitätssteigerung in Wissensarbeit



# Industrie will Techkompetenz

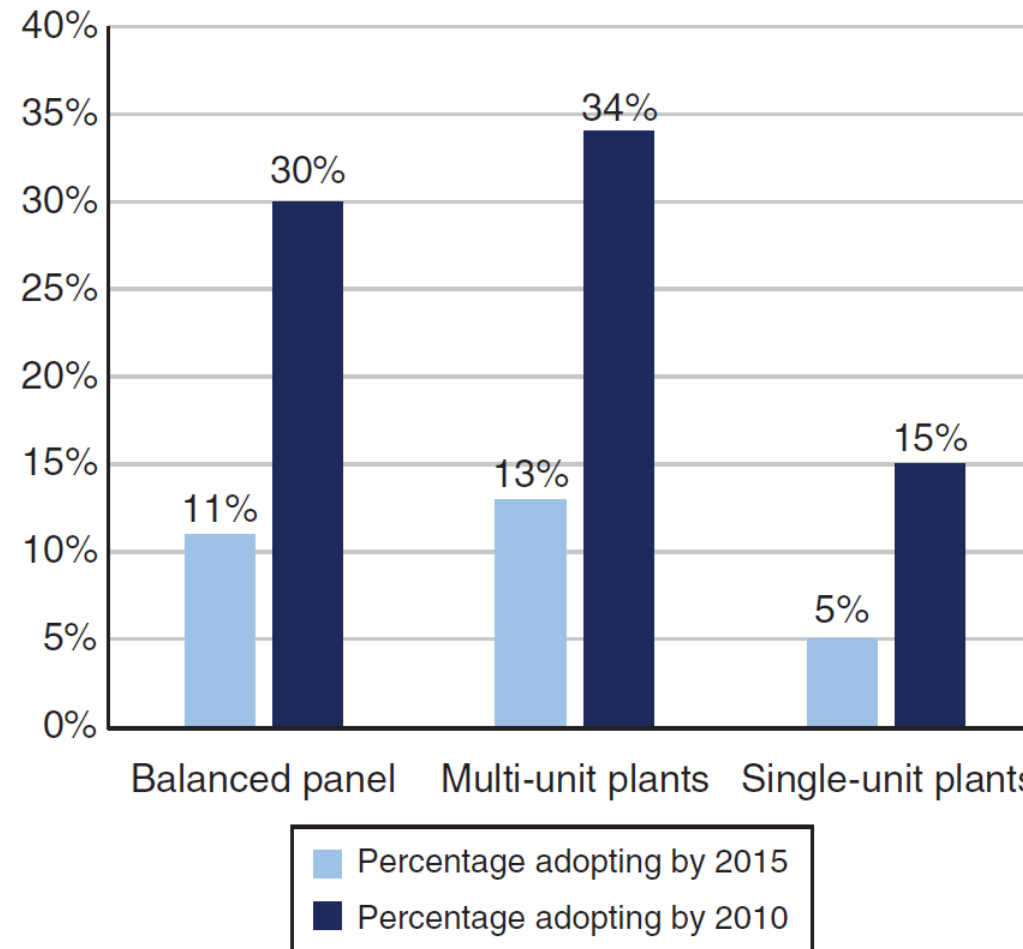
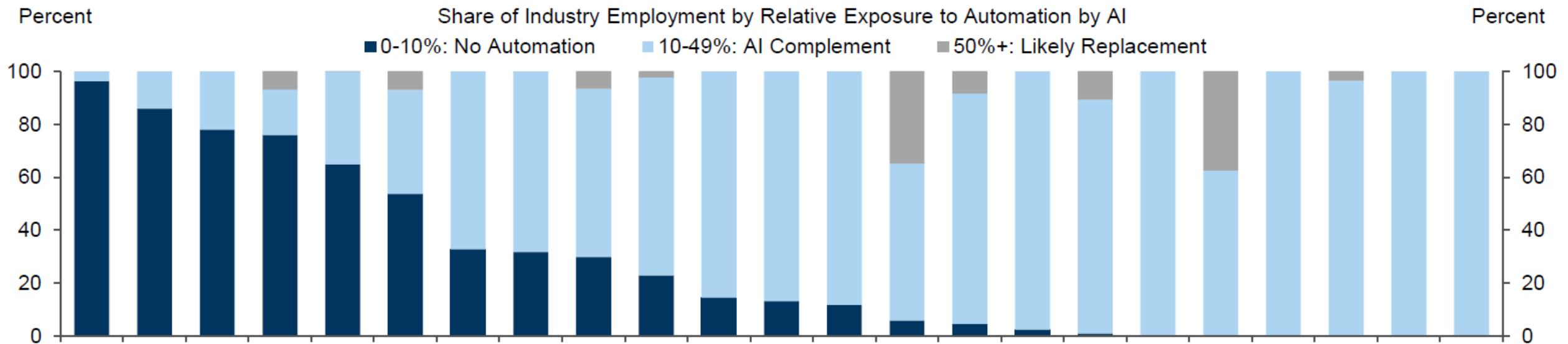
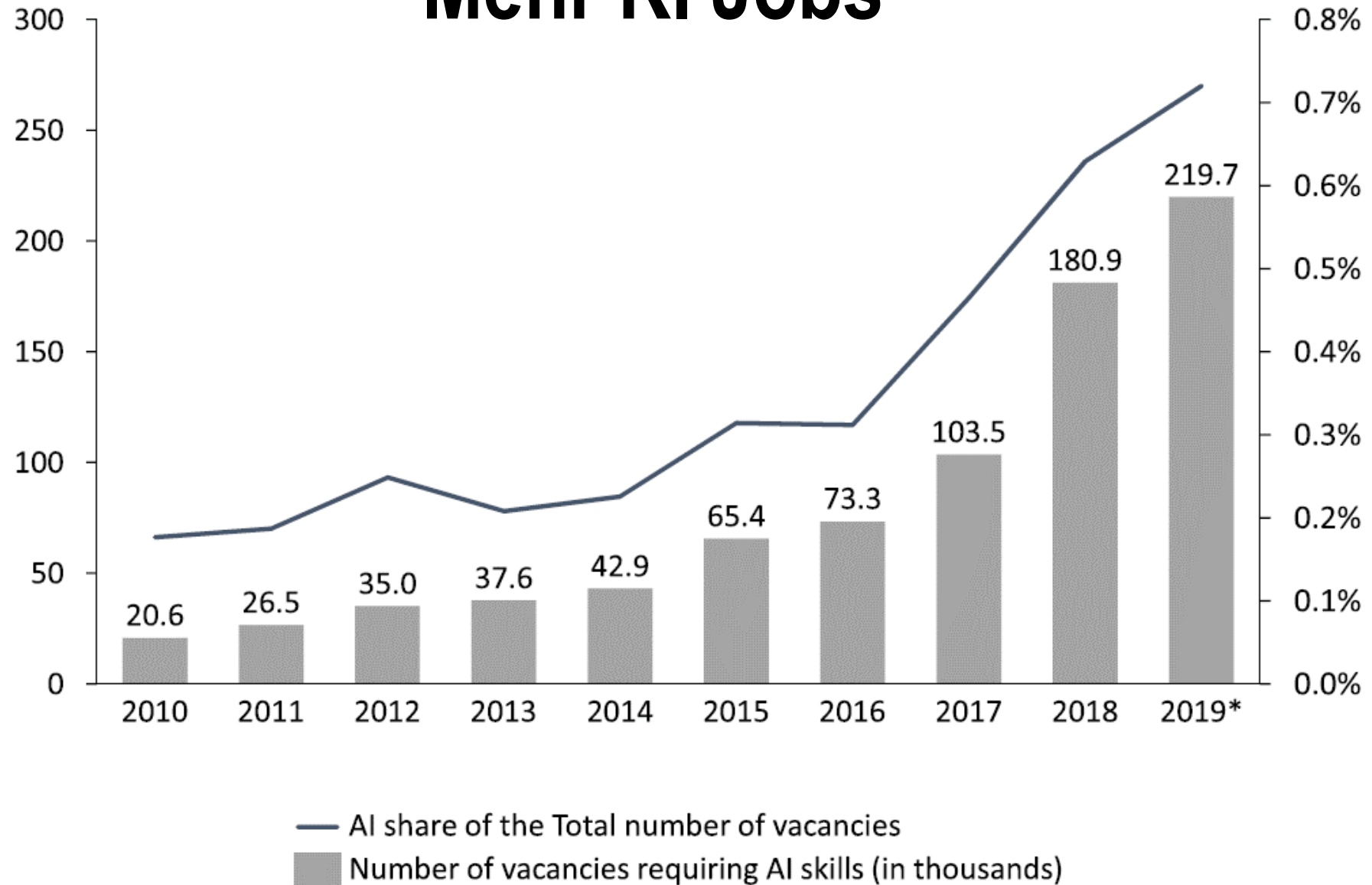


FIGURE 1. ADOPTION OF DATA-DRIVEN DECISION-MAKING IN  
US MANUFACTURING

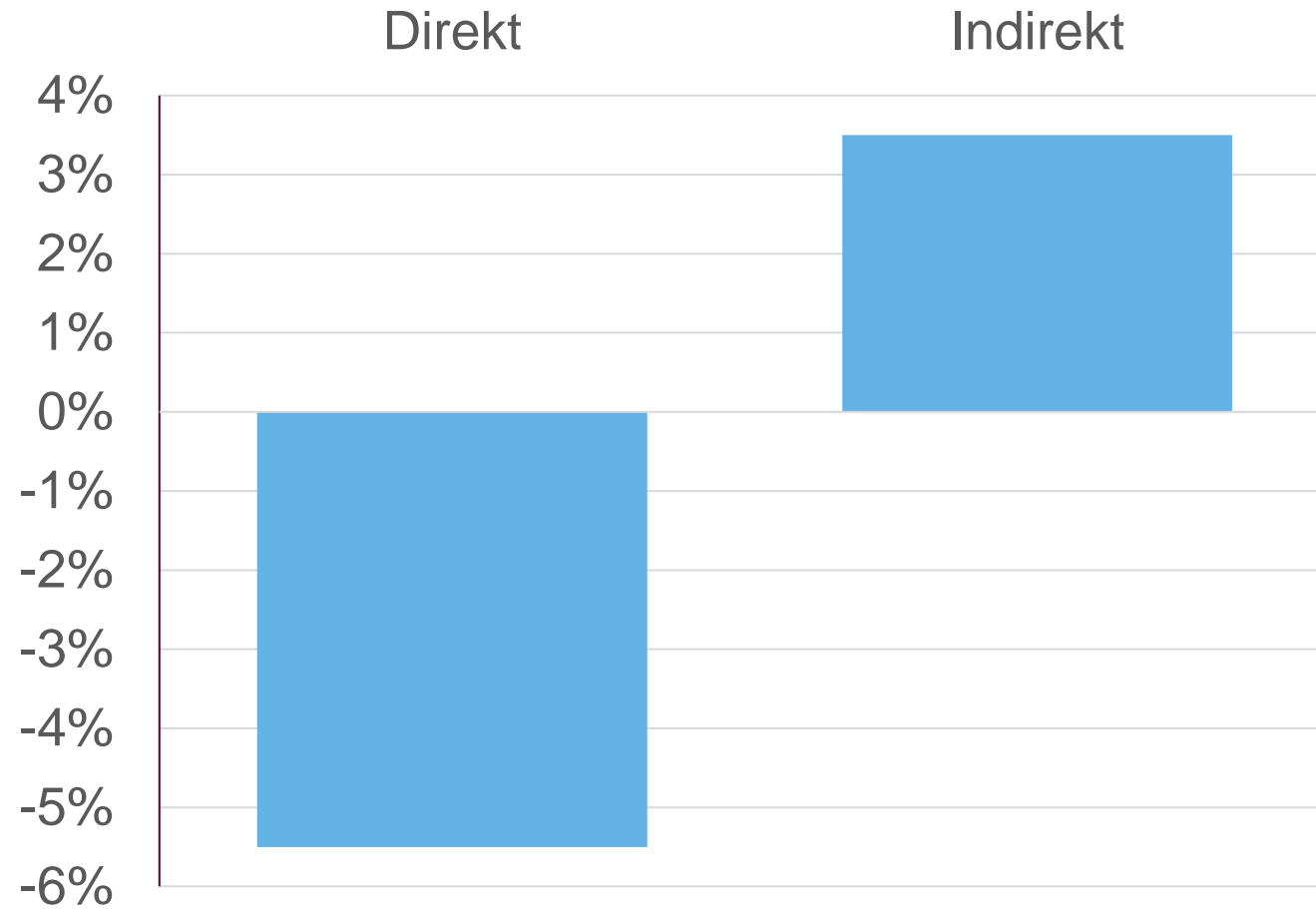
# Viele Branchen sind von KI betroffen

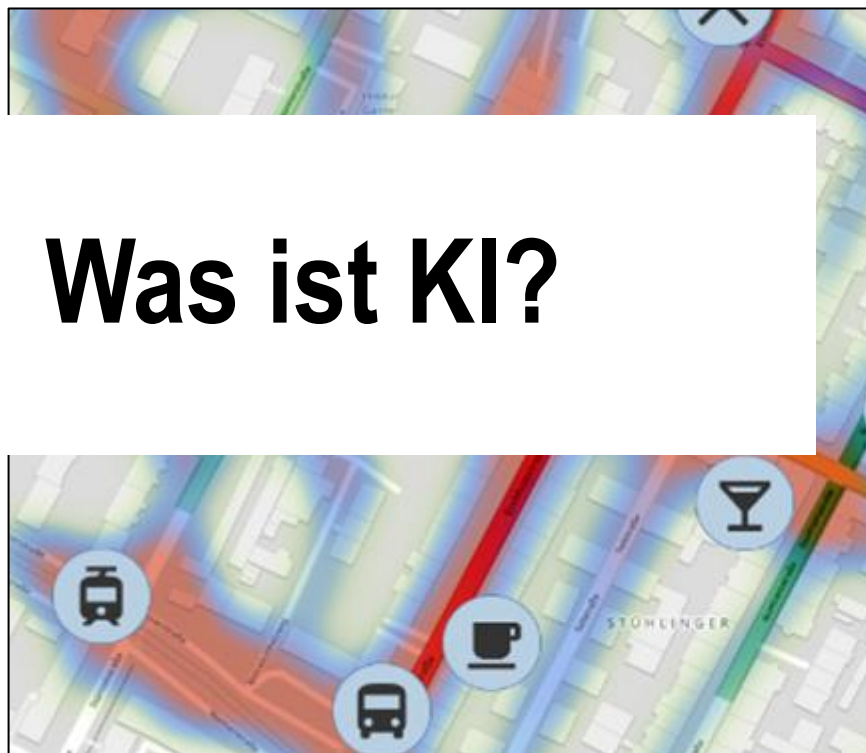
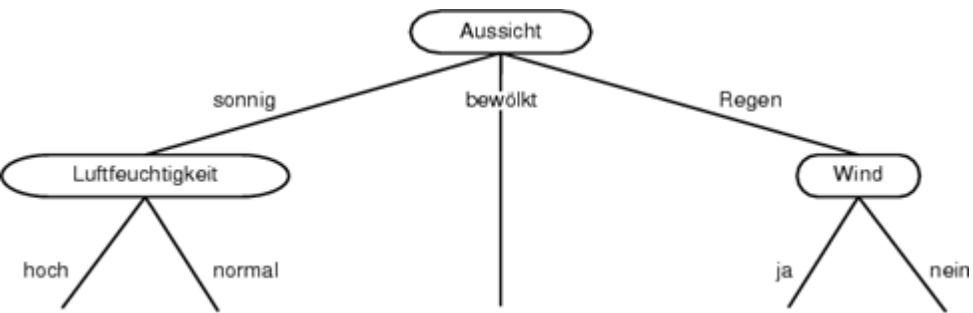


# Mehr KI Jobs



# Lohn Effekte





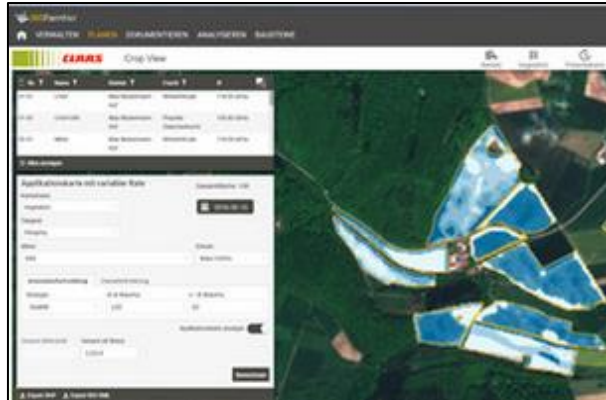
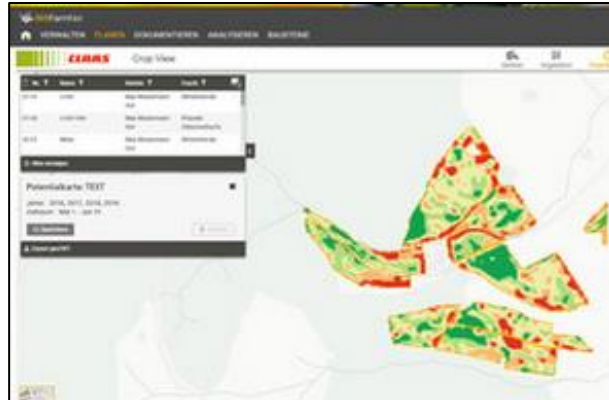
# Was ist KI?



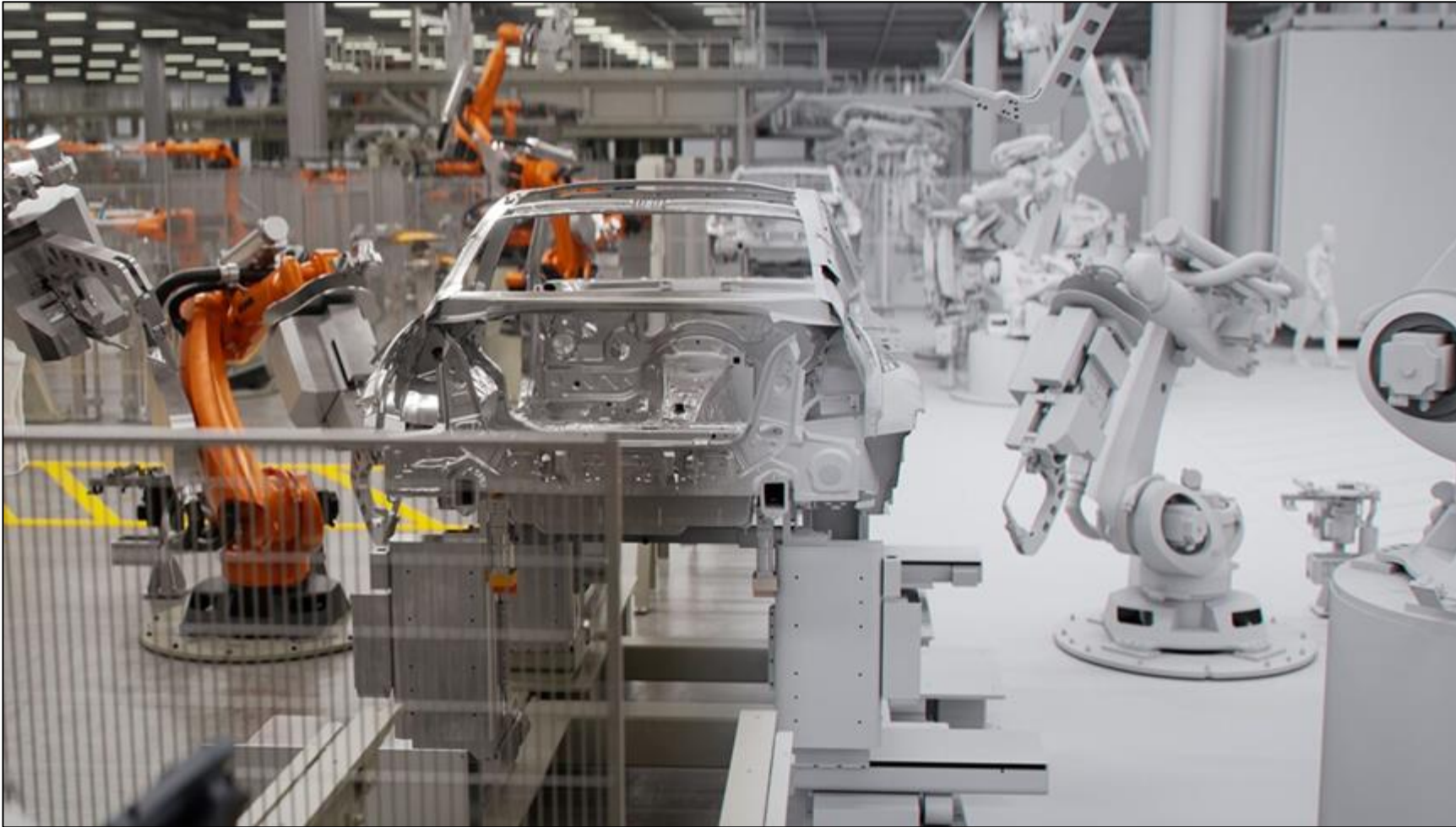


# ChatGPT

# Smart Farming



# Smart Manufacturing



# Smart Krankenhaus

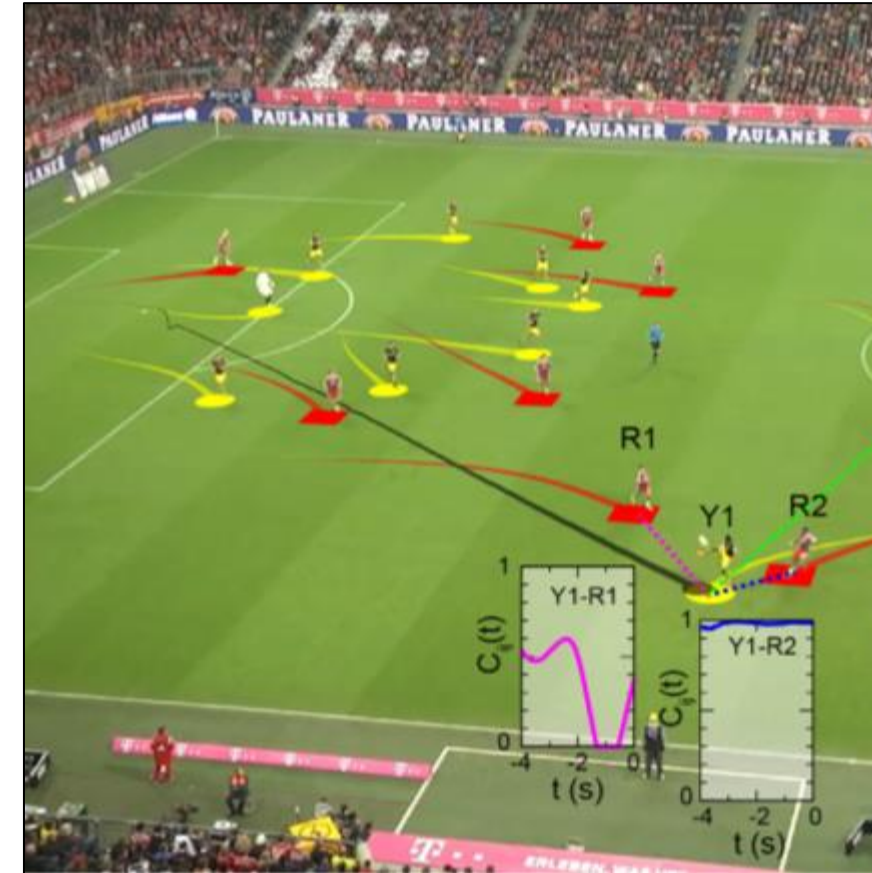


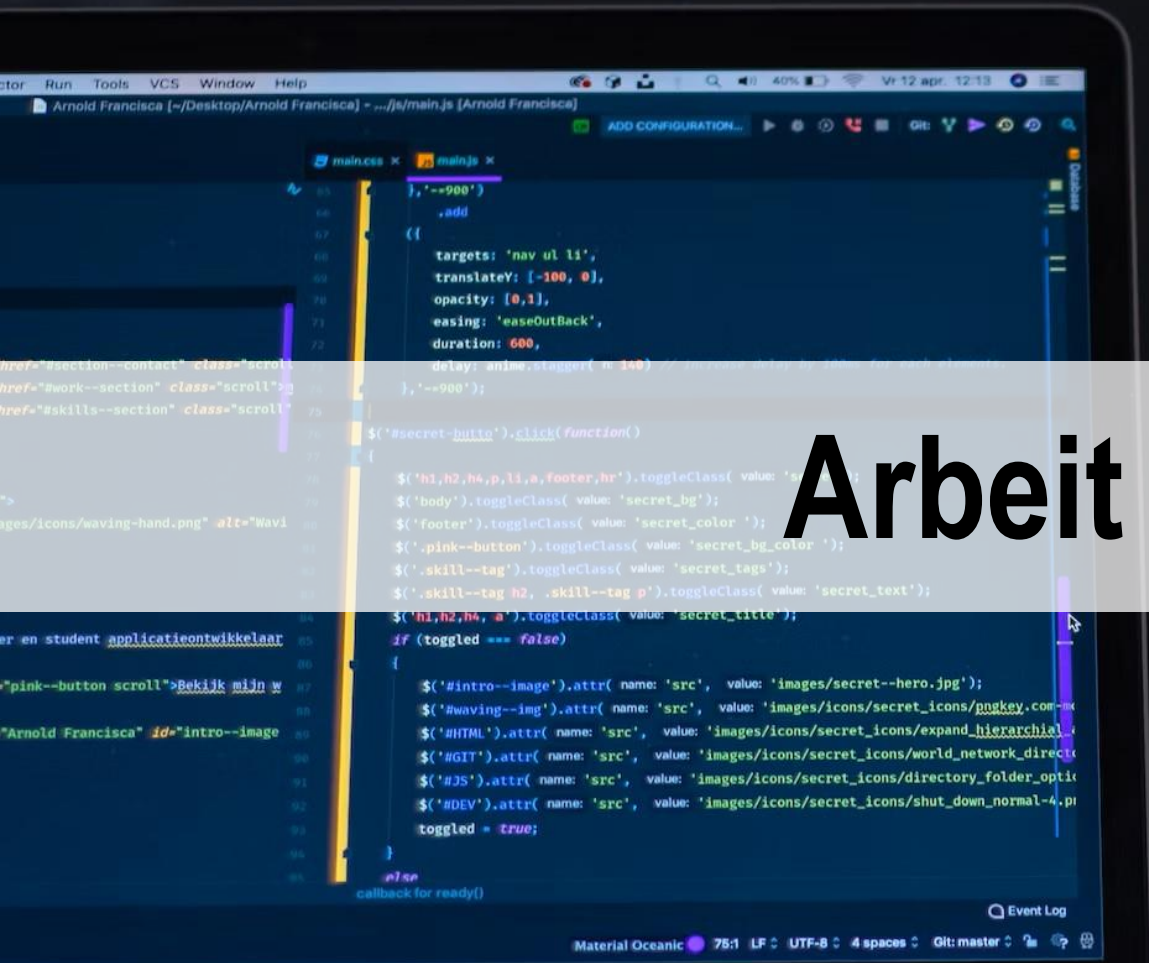


# Öffentlicher Verkehr



# Sport-, Kunden-, People Analytics





```

105  }, '--900')
106  .add
107  ({
108    targets: 'nav ul li',
109    translateY: [-100, 0],
110    opacity: [0.1,
111    easing: 'easeOutBack',
112    duration: 600,
113    delay: anime.stagger( n * 140)
114  }, '--900');
115
116  $('#secret-button').click( function()
117  {
118    $('#h1,h2,h4,p,li,a,footer,hr').toggleClass( value: 's
119    $('body').toggleClass( value: 'secret_bg');
120    $('#footer').toggleClass( value: 'secret_color ');
121    $('.pink--button').toggleClass( value: 'secret_bg_color ');
122    $('.skill--tag').toggleClass( value: 'secret_tags');
123    $('.skill--tag h2, .skill--tag p').toggleClass( value: 'secret_text');
124    $('#h1,h2,h4, a').toggleClass( value: 'secret_title');
125    if (toggle == false)
126    {
127      $('#intro--image').attr( name: 'src', value: 'images/secret--hero.jpg');
128      $('#waving--img').attr( name: 'src', value: 'images/icons/secret_icons/pngkey.com-m
129      $('#HTML').attr( name: 'src', value: 'images/icons/secret_icons/expand_hierarchy
130      $('#GIT').attr( name: 'src', value: 'images/icons/secret_icons/world_network_direct
131      $('#JS').attr( name: 'src', value: 'images/icons/secret_icons/directory_folder_opti
132      $('#DEV').attr( name: 'src', value: 'images/icons/secret_icons/shut_down_normal-4.p
133      toggled = true;
134    }
135  })
136  callback for ready()

```

# Arbeit im Wandel.





Danke.

**Jetzt seid ihr dran!**



# Quellen

1. Abdelwahed, A., van den Berg, P. L., Brandt, T., Collins, J., & Ketter, W. (2020). Evaluating and optimizing opportunity fast-charging schedules in transit battery electric bus networks. *Transportation Science*, 54(6), 1601-1615.
2. Abdelwahed, A., van den Berg, P. L., Brandt, T., Ketter, W., & Mulder, J. (2021). A Boost for Urban Sustainability: Optimizing Electric Transit Bus Networks in Rotterdam. *INFORMS Journal on Applied Analytics*, 51(5), 391-407.
3. Acemoglu, D., Koster, H. R., & Ozgen, C. (2023). Robots and workers: Evidence from the Netherlands (No. w31009). National Bureau of Economic Research.
4. Alekseeva, L., Azar, J., Gine, M., Samila, S., & Taska, B. (2021). The demand for AI skills in the labor market. *Labour economics*, 71, 102002.
5. Benbya, H., Pachidi, S., & Jarvenpaa, S. (2021). Special issue editorial: Artificial intelligence in organizations: Implications for information systems research. *Journal of the Association for Information Systems*, 22(2), 10.
6. Brynjolfsson, E., & McElheran, K. (2016). The rapid adoption of data-driven decision-making. *American Economic Review*, 106(5), 133-139.
7. Dell'Acqua, F., McFowland, E., Mollick, E. R., Lifshitz-Assaf, H., Kellogg, K., Rajendran, S., ... & Lakhani, K. R. (2023). Navigating the jagged technological frontier: Field experimental evidence of the effects of AI on knowledge worker productivity and quality. *Harvard Business School Technology & Operations Mgt. Unit Working Paper*, (24-013).
8. Esteva, A., Chou, K., Yeung, S., Naik, N., Madani, A., Mottaghi, A., ... & Socher, R. (2021). Deep learning-enabled medical computer vision. *NPJ digital medicine*, 4(1), 5.
9. Hatzius, J. (2023). The Potentially Large Effects of Artificial Intelligence on Economic Growth (Briggs/Kodhani). Goldman Sachs.
10. Hüllmann, J. A., Göritz, L., Hagen, S., Beinke, J. H., & Thomas, O. (2023). Servitization in Automotive: The Digital Transformation of Selling Product-Service Systems at a Large German Car Manufacturer. In *Proceedings of the 31st European Conference on Information Systems (ECIS)*, Kristiansand, Norway.
11. Hüllmann, J. A., Krebber, S., & Troglauer, P. (2021). The IT Artifact in People Analytics: Reviewing the Tools to Understand a Nascent Field. In *Proceedings of the 16th International Conference on Wirtschaftsinformatik*, Duisburg-Essen, Germany.
12. Hüllmann, J. A., Precht, H., & Wübbe, C. (2023). Configurations of Human-AI Work in Agriculture: Adoption and Use of Intelligent Systems by Agricultural Workers. In *Proceedings of the GIL-Jahrestagung 2023*, Osnabrück, Germany.
13. Marcelino, R., Sampaio, J., Amichay, G., Gonçalves, B., Couzin, I. D., & Nagy, M. (2020). Collective movement analysis reveals coordination tactics of team players in football matches. *Chaos, Solitons & Fractals*, 138, 109831.
14. Radford, A., Narasimhan, K., Salimans, T., & Sutskever, I. (2018). Improving language understanding by generative pre-training.
15. Rivas-Blanco, I., Pérez-Del-Pulgar, C. J., García-Morales, I., & Muñoz, V. F. (2021). A review on deep learning in minimally invasive surgery. *IEEE Access*, 9, 48658-48678.
16. Rothmeier, K., Pflanzl, N., Hüllmann, J. A., & Preuss, M. (2020). Prediction of Player Churn and Disengagement Based on User Activity Data of a Freemium Online Strategy Game. *IEEE Transactions on Games*, 13(1), 78-88.
17. Sharp, M., Ak, R., & Hedberg Jr, T. (2018). A survey of the advancing use and development of machine learning in smart manufacturing. *Journal of manufacturing systems*, 48, 170-179.
18. Van Klompenburg, T., Kassahun, A., & Catal, C. (2020). Crop yield prediction using machine learning: A systematic literature review. *Computers and Electronics in Agriculture*, 177, 105709.
19. Wang, J., Ma, Y., Zhang, L., Gao, R. X., & Wu, D. (2018). Deep learning for smart manufacturing: Methods and applications. *Journal of manufacturing systems*, 48, 144-156.
20. Xenopoulos, P., Rulff, J., & Silva, C. (2022). GgViz: Accelerating large-scale esports game analysis. *Proceedings of the ACM on Human-Computer Interaction*, 6(CHI PLAY), 1-22.
21. Zhao, B., Waterman, R. S., Urman, R. D., & Gabriel, R. A. (2019). A machine learning approach to predicting case duration for robot-assisted surgery. *Journal of medical systems*, 43, 1-8.