Can Demircan

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SKILLS

Programming: Python, R, MATLAB, Bash, HTML, CSS, JavaScript

Software and Tools: Git, $\LaTeX$, Markdown, Docker, Singularity, Continuous Integration

Languages: Turkish (native), English (fluent), German (beginner)

I am an MSc student in Neural & Behavioural Sciences, researching representation learning in humans and machines under the supervision of Dr. Eric Schulz in the research group **Computational Principles of Intelligence** located at the **Max Planck Institute for Biological Cybernetics, Tübingen Germany**.

Additionally, I am a certified instructor with the **Software Carpentry** and have taught workshops on different technical topics.

EDUCATION

MSc – Neural & Behavioural Sciences
University of Tübingen   2021 — 2023

- Thesis: Using tools of neuroscience to understand large language models: A case-study of temporal difference learning
- Member of the International Max Planck Research School for The Mechanisms of Mental Function and Dysfunction (IMPRS MMFD).

BA – Experimental Psychology
University of Oxford   2017 — 2020

- Thesis: How Task Relevance of Stimuli and Expectations Influence Visual Information Processing in the Human Brain
- Graduated with 1st Class Honours

RESEARCH EXPERIENCE

Research Assistant – Computational Principles of Intelligence
Max Planck Institute for Biological Cybernetics   2021 — 2023

- Investigating representational basis of how humans learn in naturalistic tasks using online experiments and computational modelling
- Supervised by Dr. Eric Schulz

Lab Rotation Student – Mental Health Mapping
Department of Psychiatry, University of Tübingen   2022 — 2023

- Investigated how brain structures of Social Anxiety Disorder patients differ from population norms using normative modelling
- Supervised by Dr. Thomas Wolfers

Lab Rotation Student – Vision and Cognition Group
Centre for Integrative Neuroscience, Tübingen   2022

- Investigated how real and implied motion are processed in the human brain using fMRI
- Supervised by Prof. Dr. Andreas Bartels & Dr. Pablo Grassi

TEACHING EXPERIENCE

Software Carpentry – Version Control with Git
University of Twente   2022

- Taught a one day workshop to PhD students on how to use Git

PUBLICATIONS & PREPRINTS

- **Demircan, C.**, Saanum, T., Pettini, L., Binz, M., Baczkowski, B. M., Kaanders, P., ... Schulz, E. (2023). Language Aligned Visual Representations Predict Human Behavior in Naturalistic Learning Tasks. arXiv preprint.

- **Demircan, C.**, Pettini, L., Saanum, T., Binz, M., Baczkowski, B. M., Doeller, C., ... Schulz, E. (2022). Decision-making with naturalistic options. In Proceedings of the Annual Meeting of the Cognitive Science Society (Vol. 44, No. 44).

- Senturk, Y. D., Ünver, N., **Demircan, C.**, Egner, T., & Günseli, E. (2023). The reactivation of task rules triggers the reactivation of task-relevant items. PsyArXiv preprint.