Nicholas Judd

Cognitive scientist

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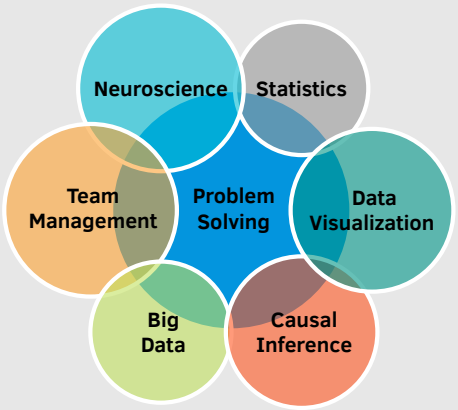
Competencies



Coding

R • Lavaan • lme4 • zsh

SQL • Python • Docker • Git

LaTeX • Julia

Scientific Experience

Cognitive training, differential psychology, neuroimaging, behavioral genetics.

Sep 2021-ongoing **Post Doctoral Scientist** — **Donders Institute & JASP Statistics**
Currently responsible for two research lines: *1)* How summer vacation effects the cortex of thousands of children and *2)* using dynamic structural equation modeling to capture varibility across a set of diverse cognitive training tasks. This work is under the supervison of Prof. Rogier Kievit. A third of my time is spent as a Data Scientist with JASP Statistics implimenting an R visualization package I wrote on raincloud.

Sep 2016-Jun 2020 **Research Scientist** — **Karolinska Institute**
Published on a variety of projects related to cognitive training, natural development, neuroimaging and behavioral genetics. Carrying out project conceptualization, design, analysis and interpretation with Dr. Torkel Klingberg. Gained skills in bayesian mixed effect modeling, SQL, longitudinal SEM, factor analysis and containerization. For part of my time I collaberated with the non-profit Cognition Matters to implement and test math training in thousands of schools in Sweden.

Feb 2016-Aug 2016 **Research Assistant** — **University of Amsterdam**
Collected data and wrote a thesis on high field MR imaging techniques to atlas the human subcortex in the lab of Dr. Birte Forstmann.

May 2012-Sep 2014 **Research Assistant** — **University California San Diego**
Examined the impact of mild traumatic brain injury on cognition, the brain, and psychiatric outcomes in 300 children. We recently published the findings.

Education

Feb 2018-Jun 2022 **Ph.D. Neuroscience** — **Karolinska Institute**
Supervisors: Dr. Torkel Klingberg & Dr. Rita Almeida

2015-2017 **M.Sc. Brain and Cognitive Sciences** — **University of Amsterdam**

2014-2015 **M.Sc. Cognitive Science** — **Umeå University**

2014-2015 **M.Sc. Psychology** — **Umeå University**

2011-2014 **B.A. (Hons) Psychology** — **DBS School of Arts**

Selected Publications

Click here for a full list and on the journal name for the specific pdf.

- Judd, N., Sauce, B., Klingberg, T. (2022). Schooling substantially improves intelligence, but neither lessens nor widens the impacts of socioeconomics and genetics. **NPJ Science of Learning**, 7(1), 33.
- Judd, N., Klingberg, T. (2021). Training spatial cognition enhances mathematical learning in a randomized study of 17,000 children. **Nature Human Behaviour**, 5, 1548–1554.
- Judd, N., Klingberg, T., Sjöwall, D. (2021). Working memory capacity, variability, and response to intervention at age 6 and its association to inattention and mathematics age 9. **Cognitive Development**, 58, 101013.
- Judd, N., et al., (2020). Cognitive and brain development is independently influenced by socioeconomic status and polygenic scores for educational attainment. **Proc. Natl. Acad. Sci. USA**, 117(22), 12411–12418.

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Invited Talks

May 2022 **American Psychiatric Association Annual meeting**
Leveraging Large Neuroimaging Studies to Elucidate Socioeconomic Impacts on Neurocognitive Development

Nov 2021 **Centre for Educational Neuroscience Seminar, UCL**
Training Spatial Cognition Enhances Mathematical Learning – A Randomized Study in 17,000 Children

Aug 2021 **European Association for Research on Learning and Instruction**
Independent effects of socioeconomic status and genetics on adolescent brain development

June 2019 **Mathematical Cognition and Learning Society**
The promise of spatial training for mathematical improvement

Teaching experience

2022-2023 **Teacher: Rainclouds in R** — **Donders Institute**
Workshops online and in-person

2018-2020 **Teacher: Basic Human Neuroscience** — **Karolinska Institute**
Medicine Program

2018-2020 **Teacher: Neuroscience** — **Karolinska Institute**
B.A. Biomedicine

2018-2020 **Teacher: The healthy human being III** — **Karolinska Institute**
Medicine Program

2019 **Assistant: Diffusion tensor imaging workshop** — **Karolinska Institute**
Workshop

2018-2019 **Assistant: Imaging in Neuroscience** — **Karolinska Institute**
Doctoral Course

Supervisory experience

2020-2021 **M.Sc. Medical technology** — **KTH Royal Institute of Technology**
Evgenija Kravchenko

2018-2019 **M.Sc. Medicine & M.Sc. Machine Learning** — **Karolinska Institute & KTH**
Sebastian Ghomri

2018-2019 **M.Sc. Neuroscience & Cognition** — **Utrecht University**
Jeshua Tromp

References

Available upon request