GAL RAZ

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Bhutan

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PROFESSIONAL SUMMARY

Cognitive scientist (MIT PhD '24, Oxford MSc '18) with expertise in computational modeling, developmental psychology, and large-scale data collection. Currently leading research and operations projects at Gelephu Mindfulness City in Bhutan and coordinating academic partnerships between Bhutanese and Japanese institutions.

EDUCATION

2024 **PhD** in Brain & Cognitive Sciences *(4.0 GPA)*, MIT
2018 **MSc** in Psychological Research (*with distinction*), University of Oxford
2016 **BSc** (Hons.) in Liberal Arts and Sciences (*summa cum laude*), University College Utrecht

WORK EXPERIENCE

2024-present **Visiting Researcher, Chiba Tech, Japan**

- Leading academic and research collaborations between Chiba Tech and Bhutanese institutions, including a joint satellite mission with JAXA and an academic scholarship program for Bhutanese students to study in Japan
- Coordinating MIT-Chiba Tech-Bhutan collaboration developing sustainable robotic construction methods ("voxel construction") using Bhutanese local materials

2024-2026 **Project Manager, Gelephu Mindfulness City**

- Founding member of the Gelephu Mindfulness City ("GMC") team, an autonomous Special Administrative Region in southern Bhutan led by His Majesty the King, building an economic hub that measures success with Gross National Happiness
- Managing projects with lawyers, tax experts and software engineers to set up a corporate registry, onboarding the first ~50 companies, creating hundreds of jobs
- Migrating thousands of businesses from Bhutan's national regulatory systems into GMC's independent company registry, tax, and customs framework
- Research and implementation of policies regarding commercial company matters, land ownership and digital assets
- Recruited and trained a team of Bhutanese to run the corporate regulatory authority of GMC

2024-2025 **Visiting Scientist, Brain & Cognitive Sciences, MIT** (Part-time)

- Advising and implementing software I built during my PhD in the Early Childhood Cognition Lab
- Studying function learning in infants and toddlers (PI: Prof. Laura Schulz)

2019-2024 **PhD Student, Brain & Cognitive Sciences, MIT**

- Devised an automated pipeline for collecting infant behavioral data, achieving a 15x speed-up compared to traditional methods, and collecting data from >700 infants
- Developed a rational choice model of attention using optimal decision theory and Bayesian inference, resulting in three first-author publications
- Core member of the ManyBabies2 and ManyBabies5 analysis team, organizing a consortium of labs to replicate key results in Theory of Mind and attentional preferences.
- Supervised 12 undergraduate and Masters students + Head TA for "Infant and Early Childhood Cognition"
- Advisors: Rebecca Saxe and Michael Frank (Stanford)
  Committee: Josh Tenenbaum, Laura Schulz, Ingmar Visser (Amsterdam)

2018-2019 **Visiting Researcher, Hitachi R&D, Japan**

- Developed statistical tools for analysis of functional near-infrared spectroscopy data

2018 **Management Consulting Intern, Oliver Wyman (Amsterdam Office)**

- Developed a statistical model of credit risk for a large European bank
- Built model into a SaaS Python project to calculate liquidity requirements using data from >50k consumer and SMB loans

AWARDS

2024 Best Paper in Developmental Psychology, American Psychological Association
2022-2024 ICoN Graduate Fellowship
2021 Walle Nauta Award for Excellence in Undergraduate Teaching
2020 Cheng Graduate Fellowship
2018 Humphrey Prize for Best Research Project Dissertation in MSc cohort
2017 Full scholarship for MSc studies by German Academic Exchange Services
2016 Kupcinet-Getz Scholar at Weizmann Institute of Science

SELECTED PUBLICATIONS (for a full list see Google Scholar)

ManyBabies 5 Consortium (in prep). A large-scale investigation of the proposed shift from familiarity preference to novelty preference in infant looking time.

ManyBabies 2 Consortium (under review). Action anticipation based on an agent's epistemic state in toddlers and adults.

Raz, G.*, Cao, A.*, Saxe, R., & Frank, M.C. (2025). A stimulus-computable rational model of habituation in infants and adults. *eLife* (*equal contribution)

Raz, G., Piccolo, S., Medrano, J., Liu, S., Lydic, K., Mei, C., Nguyen, V., Shu, T., & Saxe, R. (2024). An asynchronous, hands-off workflow for looking time experiments with infants. *Developmental Psychology* (Editor's Choice Award)

Raz, G., Cao, A., Frank, M. C. & Saxe, R. (2023). No evidence for familiarity preferences after partial exposure to visual concepts in preschoolers and infants. *45th Proceedings of the Annual Meeting of the Cognitive Science Society.*

Raz, G., Cao, A., Saxe, R., & Frank, M.C. (2023). Modeling habituation in infants and adults using rational curiosity over perceptual embeddings. *NeurIPS* (IMOL Workshop)

Cao, A., **Raz, G**, Saxe, R & Frank, M. C. (2023). Habituation reflects optimal exploration over noisy perceptual samples. *Topics in Cognitive Science, 15(2), 290-302.* (Best Computational Paper Award)

Liu, S., **Raz, G.**, Kamps, F., Grossmann, T., & Saxe, R. (2023). No evidence for discontinuity between infants and adults. *Trends in Cognitive Sciences, 27(8), 694-695.*

Sella, F., **Raz, G.** & Cohen-Kadosh, R. (2021). When randomisation is not good enough: Matching groups in intervention studies. *Psychonomic Bulletin & Review, 1-9.*

Saban, W., **Raz, G.**, Grabner, R. H., Gabay, S., & Kadosh, R. C. (2021). Primitive visual channels have a causal role in cognitive transfer. *Scientific Reports, 11(1), 8759.*

Raz, G. & Saxe, R. (2020). Learning in Infancy Is Active, Endogenously Motivated, and Depends on the Prefrontal Cortices. *Annual Review of Developmental Psychology, 2, 247-268*.

COMMUNITY SERVICE AND OUTREACH

2017 - present Volunteer at Dhamma Meditation Centers

- Regularly volunteer at 10-day silent meditation retreats in Germany, Israel and UK
- Lead teams of 8-10 volunteers to cook two daily meals for 100-200 meditators

2020 - 2024 Member of Graduate Student Council of the School of Science, MIT

- Advising the Dean's office on graduate student affairs
- Implemented an internship policy and relocation stipend for incoming graduates

2017 English & Math teacher at Lamdon Jamyang School, Ladakh

- 6-month placement teaching kids aged 6-13 in a village in Northern India

MISCELLANEOUS SKILLS AND EXPERIENCES

Languages: German, English and Hebrew (fluent), Spanish (level B2)

Programming languages (in order of proficiency): Python, R, Stan, MATLAB, JavaScript, Unity scripting (C#), WebPPL

Teaching Certification:

- Graduate Teaching Certificate @ MIT Teaching + Learning Lab across four semesters
- TEFL Certificate (120-hour course for teaching English as a foreign language)

Online courses (click course names for certificates):

Machine Learning (Stanford)
Computational Neuroscience (UW)
MATLAB Programming (Vanderbilt)
Bayesian Statistics I (UC Santa Cruz)
Bayesian Statistics II (UC Santa Cruz)
Python for Data Science and ML (Udemy)

For fun: Vipassana meditation, Judo, Yoga, chess, poker, RTS games, electronic music