Lu **LENG**

DATA ANALYST

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EDUCATION

Ph.D. in Experimental Psychopathology | KU Leuven — Leuven, Belgium
DATA SCIENCE SPECIALIZATION — *Oct. 2019 - Oct. 2024*
Advanced applied statistical analysis; functional programming (R/Python/Matlab); project management

M.Sc in General Psychology | KU Leuven — Leuven, Belgium
MAGNA CUM LAUDE, MASTER MIND SCHOLARSHIP — *Sept. 2017 - Sept. 2019*
Advanced statistics for psychology; programming with R/Python; advanced experiment design

B.Sc in Psychology | Beijing Normal University — Beijing, China
HONOR SCHOLARSHIP (TOP 2%) — *Sept. 2013 - Jul. 2017*
Fundamentals of advanced mathematics; statistics for psychology; programming with C++

EXPERIENCE

Graduate Research Fellow | KU Leuven — *Oct. 2019 - Present*
- Preprocessed 1TB unstructured behavioral, psychophysiological, and neuroimaging data (e.g., linear transformation, temporal filtering, spatial smoothing) for 6 projects, resulting in 6 publications in esteemed scientific journals.
- Applied advanced statistics in R to improve understanding of human behaviors and emotions. Ensured transparency and reproducibility by making all data and scripts were freely accessible on the Open Science Framework.
- Supervised 11 international master students and research interns with various backgrounds. Coordinated weekly meetings to review progress, troubleshoot issues, and ensure the timely completion of research objectives.

Teaching Fellow | KU Leuven — *Oct. 2019 - Present*
- Conducted weekly lectures and provided hands-on training in R for psychology master students in advanced statistics (e.g., A/B testing, ANOVA, linear regression, mixed effects models, model selection, cross-validation).
- Prepared and evaluated both data analysis reports and R codes for assignments and exams, ensuring high standards of academic rigor and practical application.

Online Game Programmer | KU Leuven — *Mar. 2020 - Dec. 2023*
- Designed online games targeting different age groups for several research teams to study various learning performances.
- Programmed games with intuitive and engaging interfaces using JavaScript and Python, with all code hosted on GitHub.

Lab Outreach Coordinator | KU Leuven — *Dec. 2019 - Present*
- Solely designed, built, and maintained the BRAMlab website for the entire research team, ensuring a user-friendly interface and robust functionality to enhance the research team's online presence and accessibility.
- Created and maintained the social media platform for the lab, increasing visibility within the research community.

SELECTED PROJECTS

Maladaptive learning in anxiety and depression — *Oct. 2019 - Present*
- Led this project of 2 graduate students and 6 research assistants for over 4 years. Coordinated and managed large datasets collection, processing, and analysis, ensuring data accuracy and integrity. Provided comprehensive training on collecting data in the lab and processing psychophysiological signals using Ledalab in MATLAB.
- Designed and built the learning tasks from scratch to align them with research objectives and standards. Scripted in R for data processing and visualization. Created clear and insightful graphical representations in Rmarkdown.
- Employed advanced statistics including data multiverse, clustering, principle component analysis, and mixed effects modeling. Discovered distinct maladaptive learning profiles for anxiety and depression despite their high comorbidity rate, contributing to a deeper understanding of psychological conditions.

Neural signature of relief — *Sept. 2022 - Present*
- Designed and executed fMRI experiments to investigate brain activation patterns, specifically examining whether relief activates pleasure sites in the brain using advanced neuroimaging techniques.
- Preprocessed raw data using High Performance Computing cluster with parallel computing. Analyzed neuroimaging data in MATLAB and R using statistical methods (e.g., region of interest analysis, conjunction analysis, etc.) and machine learning techniques (e.g., Multivariate Pattern Analysis) to identify significant brain activation patterns associated with relief.
- Demonstrated that in the brain, the processing of relief engaged similar brain regions that are typically involved in processing rewards, with overlapping activations in specific regions.

SKILLS

Languages/Tools	R, Python, MATLAB, SQL, JavaScript, Git, Github, C, SPSS, JASP.
Stast/Experiments	A/B testing, UX research, experimental design, causal inference, generalized linear mixed model (GLMM), classification, clustering, principle component analysis.
Output delivery	Received the Best Poster Award three times at international conferences; Received the Best Article Prize at international doctoral school. See my google scholar page for full publications..