Yseult Héjja-Brichard

POSTDOCTORAL RESEARCHER

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PROFILE

With 8 years of experience in research, I have managed several projects, which included:
- developing experimental designs
- managing collaborations
- collecting different types of data
- statistical analysis and modelling
- writing peer-reviewed articles for specialised audiences.

More recently, I have added deep learning to my toolbox with projects involving convolutional neural networks, auto-encoders, and NLP algorithms (semantic similarity, text clustering).

I also regularly take part in events of science communication.

TECHNICAL SKILLS

Data analysis
- Data prep & QA
- Exploratory data analysis
- Data visualization
- Data modelling

Programming
R - Matlab - Python
Latex - RMarkdown - Git
HTML - CSS - JavaScript

SOFT SKILLS

Problem Solving

Communication

Teamwork

Adaptability

WORK EXPERIENCE

POSTDOCTORAL RESEARCHER   Nov 2020 - Present
UMBC, US & CEFE-CNRS, FR

Project management

- Style Transfer: Used a CNN-based technique to create images; designed behavioral experiments and made video animations for studies on fishes; collected and analysed the data with mixed-effect models. Presented the study at a specialised conference and wrote a research article.

  Tools: Python (PyTorch), Blender, R (lme4, spaMM, glmer)

- Visual Patterns: Created an online experiment to investigate visual preferences, collected and analysed the data with mixed-effect models, and wrote a research article. Managed the collaboration with a team from Bristol, UK and two teams from Montpellier, FR.

  Tools: HTML/CSS, JavaScript, SQL, PHP; R (lme4, glmer, coxme)

- Meta-analysis: Conducted a meta-analysis of data from different fish species requiring to contact lead authors of published studies. Controlled for phylogenetic information using meta-regression models; presented the results at a conference and wrote a research article.

  Tools: R (metafor), MEGA (phylogenetic analysis)

Mentoring and supervision

- Supervised and mentored team members with different expectations (from undergraduates to PhD students)
- Provided advice and guidance on statistical analyses
- Gave presentations on open science practices and taught an introduction to Deep Learning

EDUCATION

Summer schools on Deep Learning and Artificial Intelligence   2021, 2022
Neuromatch Academy
Center for Brains, Minds, and Machines

PhD in Cognitive Neuroscience   2015-2020
Université Toulouse 3 Paul Sabatier

Msc in Neuroscience, Cognition, and Behaviour   2014-2015
Université Toulouse 3 Paul Sabatier

Bsc & Msc in Cognitive Psychology   2011-2014
Université Grenoble-Alpes