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LEFORT-BESNARD Jérémy

Currently postdoc at Inserm U1075 Comete, France

· Brain imaging · Psychiatry · Quantitative neuroscience

EDUCATION

2015-2019	Ph.D in computational neuroscience (Magna Cum Laude) Supervision: Prof. Danilo Bzdok, RWTH University Prof. Danielle S. Bassett, UPENN Scholarship: International Research Training Group (DFG-IRTG 2150)	<i>RWTH Aachen, Germany</i>
2015	Master “Neurosciences, Cognition and Psychology” (with honors) Psychologist title , supervision by the Master “Child psychology”	<i>University of Tours, France</i>
2013	Bachelor in Psychology (with honors)	<i>Bucknell University, USA and University of Tours, France</i>

SELECTED PUBLICATIONS

All codes are hosted on my Github account

- Peer reviewed journal -

Lefort-Besnard J., Clemens B., Ritter C., Smith E., Votinov M., Derntl B., Habel U., Bzdok D. Accurate machine-learning prediction of sexual orientation based on brain morphology and intrinsic functional connectivity. *Cerebral Cortex*. 2022.

In charge of the full statistical workflow (stacking pipeline with classification models)

Chechko N, **Lefort-Besnard J**, Eickhoff S, Stickel S, Goecke T, Frensch M, Habel U, Lang J, Bzdok D. Restless legs syndrome in pregnancy: Striatum structure explains most behavioral differences. *Nature: Scientific Reports*. 2021

My technical responsibilities included the regularized regression and the CCA analyses.

Lefort-Besnard J., Vogeley K, Schilbach L, Varoquaux G, Thirion B, Dumas G, Bzdok D. Patterns of Autism Symptoms: Hidden Structure in the ADOS and ADI-R instruments. *Nature: Translational Psychiatry*. 2020

In charge of the full statistical workflow (clustering and sparse regression analyses)

Lefort-Besnard J., Varoquaux G., Derntl B., Gruber O., Aleman A., Jardri R., Sommer I., Thirion B., Bzdok D. Patterns of Schizophrenia Symptoms: Hidden Structure in the PANSS Questionnaire. *Nature: Translational Psychiatry*. 2019

In charge of the full statistical workflow (clustering, linear and non-linear analyses)

OHBM 2019 Roma abstract presentation

Lefort-Besnard J., Bassett S.D., Smallwood J., Margulies S.D., Derntl B., Gruber, O., Aleman A., Jardri R., Varoquaux G., Thirion B., Eickhoff B.S., Bzdok D. Different shades of default mode disturbance in schizophrenia: Subnodal covariance estimation in structure and function. *Human Brain Mapping*. 2017. 39:644–661

In charge of the full statistical workflow (sparse inverse covariance)

OHBM 2018 Singapor abstract presentation + awarded of the DAAD travel grant

- Conference paper -

Lefort-Besnard J., Wan-Ting Hsieh, Hao-Chun Yang, Li-Wei Kuo, Chi-Chun Lee. Behavior Score-Embedded Brain Encoder Network for Improved Classification of Alzheimer Disease Using Resting State fMRI. *IEEE EMBC* 2020.

In charge of the full scans preprocessing + statistical workflow (Convolutional Neural Network and autoencoder)

- Under review -

Lefort-Besnard J., Naveau M., Delcroix N., Cignetti M., Decker L. Patterns of structural and biological alterations following neuropsychologically-informed staging of MCI. 2022.

In charge of the full scans preprocessing downloaded from the ADNI database + statistical workflow (clustering + regularized regression analyses)

OHBM 2022 Glasgow abstract presentation

RELEVANT EXPERIENCE

2022	Poster Presentation OHBM conference	Glasgow, UK
Since 2021	Postdoctoral researcher on identifying underlying processes of cognitive decline	
	Teacher Python class and machine learning class	Caen university, France
	Full access to all videos of my courses on my website ('Français' Tab)	
2020	Data scientist with an autoentrepreneur status working (mostly) for Melio company based in the US. I worked on implementing a Google Chrome extension that would list Amazon items based on CO2 emissions to manufacture and transport the items. The main idea is to guide the buyer to select the least polluting product.	
2019-2020	Postdoctoral researcher on learning predictive models based on behaviors, brain-region and brain-network priors	NTHU, Taiwan
2018+2020	Project presentation IRTG 2150 conference	RWTH Aachen, Germany
2020	Teacher "HTML, CSS and JS"	NTHU, Taiwan
2019	Sys Admin Gitlab instance on Ubuntu server	NTHU, Taiwan
2019	Teacher "Using Git, Github and creating a science portfolio"	NTHU, Taiwan
2018	Teacher "Using Git, Github and creating a science portfolio"	RWTH Aachen, Germany,
2018	Hackaton Focus on Pytorch	Zurich, Swiss
2018	Poster Presentation OHBM conference	Suntec, Singapore
2017+2018	Teacher assistant "Machine learning crash course"	RWTH Aachen, Germany
2017+2018	Teacher "Introduction to Python"	RWTH Aachen, Germany
2017	Hackaton Focus on Pycortex and Pandas hacks	Max Plank Leipzig
2017	Project Presentation IRTG 2150 conference	UPENN, USA
Since 2016	Blog https://losangebleu.site scripted from scratch using html/CSS/JS/PHP + MySQL/phpMyAdmin	
2013-2015	Founder and President of Erasmus Student Network Tours (10.000 Euros annual budget)	
2016-2018	Writer on Quora @Jeremy-Lefort-Besnard (800.000 content views in English, 300.000 in French)	

SKILLS & MISCELLANEOUS INFORMATION

Computer	Mostly Python but also R, Matlab and Bash
Neuroimaging	SPM, Fmripreg, Mriqc, Dcm2bids, Mango, DSI studio, Nibabel, Nilearn
Website	JS, PHP, MySQL, PhpMyAdmin
Android	Kotlin (Android Studio)
Daily use	Git version control, Jupyter notebooks, Linux machine
Language	French native, English full working proficiency, some German and Chinese
Hobbies	home automation (w. Arduino), I try to run a marathon every 3 years, volunteering

Python module by frequency of use:

