

LEFORT-BESNARD Jérémy

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#PythonProgramming #MachineLearning #ClinicalData

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 University, 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

- Peer reviewed journal -

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. *Scientific Reports*. 2021

Canonical Correlation Analysis, Ridge regression

Input data: clinical questionnaire's scores, demographic data, fMRI (time-series), MRI (voxels),

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. *Translational Psychiatry*. 2020

K-means clustering, sparse logistic regression, bootstrap confidence interval

Input data: clinical questionnaire's scores, demographic data

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. *Translational Psychiatry*. 2019

Ridge Regression, SVM, PCA, Random Forest, kNN, Adaptive Boosting

Input data: clinical questionnaire's scores, demographic data

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

Sparse Inverse Covariance, Lasso, Hypothesis Testing

Input data: fMRI (time-series), MRI (voxels), demographic data

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*.

Convolutional Neural Network, Autoencoder, SVM, Ridge Regression,

SVM, PCA, Random Forest, kNN, Adaptive Boosting

Input data: fMRI (time-series), clinical questionnaire's scores, demographic data

42nd Annual International Conference IEEE EMBC 2020 Montreal presentation

RELEVANT EXPERIENCE

Since 2021	POSTDOCTORAL RESEARCHER on identifying underlying processes of cognitive decline Inserm, Caen university, France
2019-2020	POSTDOCTORAL RESEARCHER on learning predictive models based on behaviors, brain-region and brain-network priors NTHU, Taiwan
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
2018+2019	Teacher "Using Git, Github and creating a science portfolio"	RWTH Aachen, Germany, NTHU, Taiwan
2018	Hackaton Focus on Pytorch	Zurich, Swiss
2018	Project presentation IRTG 2150 conference	RWTH Aachen, Germany
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	

SKILLS & OTHER RELEVANT EXPERIENCES

Numbers	Machine learning/Statistics
Research	Brain imaging, psychiatry, quantitative neuroscience, personalized medicine
Computer	Python, R, Matlab, SPSS, Bash scripts, VirtualBox
Website	HTML, CSS, JS, PHP, MySQL, phpMyAdmin
OS	Linux, Mac, Windows
Version control	Git, Github, Gitlab
Editor	Markdown, Latex, Jupyter, VIM, GIMP, Office
Communication	Slack, Mattermost
Language	French native, English full working proficiency, some German and Chinese
2013-2015	Founder and President of ESN Tours (10.000 Euros annual budget)
Since 2016	Writer on Quora @Jeremy-Lefort-Besnard (500.000 content views in English, 250.000 in French, 700 followers)
Hobbies	I try to run a marathon every 3 years, hiking, free (libre) softwares, volunteering



Brain computed using the wordcloud package with my publications as input
(https://github.com/JLefortBesnard/Brain_filled_with_words)

