Alexis Thual

4th-year PhD student in neuroscience
Full-stack developer & Machine Learning engineer

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PROFESSIONAL EXPERIENCE

London
oct. 2023
jun. 2023

Research Scientist intern - FAIR Meta, Brain and AI team
Developed and published a method to transfer algorithms that decode visual perception from fMRI from one human individual to another

Paris
nov. 2019
jan. 2018

Founder - Arkhn
Open-source project meant to standardize healthcare data; lead technical developement and managed a team of 8
arkhn.com

Paris
nov. 2019
jul. 2018

Data scientist & web developer - Bureau Ouvert de l'Assemblée Nationale
Animated weekly meetings at the French Parliament; developed web-based tools fostering public action transparency
budget.parlement-ouvert.fr, jo.parlement-ouvert.fr, transparence.parlement-ouvert.fr, questions.parlement-ouvert.fr

Paris
aug. 2018
apr. 2018

Research intern - Laboratoire de Sciences Cognitives et Psycholinguistique at ENS Ulm
Implemented non-supervised segmentation of audio signal to mimic language acquisition of phonemes and words
1 publication at SLT 2018 : bit.ly/38cjGYZ

London
aug. 2017
apr. 2017

Forward deployed software engineer intern - Palantir
Contributed to developing web-applications, managing a Hadoop cluster and implementing industry optimisation algorithms

ACADEMIC BACKGROUND

Paris
now
nov. 2020

Neurospin (CEA) & Parietal (Inria) - PhD in neuroscience
My research consists in using Optimal Transport so as to compare cortical structures of human and non-human primates and training brain decoders. This work is done under the supervision of Stanislas Dehaene and Bertrand Thirion

Paris
sept. 2018
sept. 2017

ENS Cachan - Research master
Master Mathématiques, Vision, Apprentissage
Natural Language Processing, Computer Vision, Signal Processing, Convex Optimization, Reinforcement Learning, Graphs in Machine Learning, Models for Neuroscience

Paris
jul. 2018
sept. 2014

École polytechnique - Engineering curriculum
Master equivalent in applied maths, computer science and physics; majored in statistics and computer science

Paris
jul. 2014
sept. 2012

Lycée Louis-Le-Grand - Preparatory school
Majored in mathematics, physics and computer science

OTHER SKILLS

Public speaking

Team management

Illustration and design

PERSONALITY

Traits   Enthusiastic, persistent, organised, curious

LANGUAGES

Français   Mother tongue

English   Full proficiency
C2 (2011)

Mandarin   Intermediate
HSK4 (2016)

PUBLICATIONS

Aligning brain functions boosts the decoding of visual semantics in novel subjects
Alexis Thual, Yohann Benchetrit, Felix Geilert, Jérémy Rapin, Iurii Makarov, Hubert Banville, Jean-Rémi King
arXiv 2023

Individual Brain Charting third release, probing brain activity during Movie Watching and Retinotopic Mapping
Ana Luísa Pinho, Hugo Richard, Michael Eickenberg, Alexis Amadon, Elvis Dohmatob, Isabelle Denghien, Juan Jesús Torre, Swetha Shankar, Himanshu Aggarwal, Ana Fernanda Ponce, **Alexis Thual**, Thomas Chapalain, Chantal Ginisty, Séverine Becuwe-Desmidt, Séverine Roger, Yann Lecomte, Valérie Berland, Laurence Laurier, Véronique Joly-Testault, Gaëlle Médiouni-Cloarec, Christine Doublé, Bernadette Martins, Gaël Varoquaux, Stanislas Dehaene, Lucie Hertz-Pannier, Bertrand Thirion
arXiv 2023

Should one go for individual-or group-level brain parcellations? A deep-phenotyping benchmark
Bertrand Thirion, Himanshu Aggarwal, Ana Fernanda Ponce, Ana Luísa Pinho, **Alexis Thual**
Brain Structure and Function 2023

Aligning individual brains with Fused Unbalanced Gromov-Wasserstein
Alexis Thual, Huy Tran, Tatiana Zemskova, Nicolas Courty, Rémi Flamary, Stanislas Dehaene, Bertrand Thirion
NeurIPS 2022

From deep brain phenotyping to functional atlasing
Bertrand Thirion, **Alexis Thual**, Ana Luísa Pinho
Current Opinion in Behavioral Science 2021