Dr. Julien **Vitay**

RESEARCHER IN ARTIFICIAL INTELLIGENCE · DATA SCIENTIST · PYTHON DEVELOPER / SCIENTIFIC COMPUTING

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Education

Chemnitz University of Technology	Chemnitz, Germany
HABILITATION - COMPUTER SCIENCE	January 2017
Université Henri Poincaré Nancy-I	Nancy, France
PH.D - COMPUTER SCIENCE	June 2006
École Supérieure d'Électricité - Supélec	Rennes, France
ENGINEER IN MICROELECTRONICS AND SIGNAL PROCESSING	Juin 2002

Experience

Assistant Professor - Intelligence Artificielle Chemnitz, Germany

CHEMNITZ UNIVERSITY OF TECHNOLOGY, DEPARTMENT OF COMPUTER SCIENCE 2011 - Today

- Creation and teaching of complete modules: Machine Learning, Computer Vision, Deep Reinforcement Learning.
- Supervision of 100+ bachelor's/master's theses, most of them in companies: deep learning, computer vision, data science, automotive software, time series processing, etc.
- Research in computational neuroscience, reinforcement learning and decision-making.
- Machine learning research: reservoir computing, deep reinforcement learning, cyber security, anomaly detection, geometric deep learning, emotion recognition.

Postdoc Münster, Germany

UNIVERSITY OF MÜNSTER, INSTITUTE OF PSYCHOLOGY. 2006 - 2011

- Computational neuroscience research on reinforcement learning, dopamine and basal ganglia.

Ph.D student and teaching assistant Nancy, France

INRIA LORRAINE (LORIA), TEAM CORTEX. 2002 - 2006

- Research in neurorobotics (Mirrorbot European project), visual attention, basal ganglia.
- Teaching of Java, C, computer architecture.

Selected projects

ANNarchy (Artificial Neural Networks architect) ⌂ ANNarchy/ANNarchy

CREATOR AND MAIN DEVELOPER. 2007 - Today

- Bio-inspired neural network simulator in Python, based on high-performance C++ code generation.
- Distributed computing with OpenMP and CUDA, self-tuning methods for computational kernels.

ML@Karoprod mesh predictor ⌂ hamkerlab/ML-Karoprod-MeshPredictor

BMBF RESEARCH PROJECT. 2018 - 2022

- Framework for accelerating the search for functional parameters in finite element simulations (FEM), using deep neural networks and implicit representations (NERF).

Deep Reinforcement Learning ⌂ vitay/deeprl

WEBBOOK. 2018 - Today

- Open-source book on the state of the art in deep reinforcement learning.

Compétences

Programming	**Python**, **C++**, C, Java, Matlab, Julia
Languages	**Français**, Anglais, Allemand
Machine Learning	pytorch, tensorflow, scikit-learn, XGBoost, rllib, tianshou, mlflow
Stack	linux, git, docker, gcp, openMP, CUDA