Dr. Julien **Vitay**

Researcher in Artificial Intelligence · Machine Learning Engineer · Python developer

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Education

Chemnitz University of Technology — Chemnitz, Germany
Habilitation - Computer Science — January 2017

University 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 Languages	**Python**, **C++**, C, Java, Matlab, Julia
	French, English, German
Machine Learning Stack	pytorch, tensorflow, scikit-learn, XGBoost, rllib, tianshou, mlflow, wandb
	linux, git, docker, gcp, openMP, CUDA