Vadim BERTRAND

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Grenoble area
FRANCE

Statistics and Data Sciences 2nd year Master Student – Software Engineer

EDUCATION

- **2022 – 2023 (expected) Université Grenoble Alpes – IM²AG**
  2nd year Master's in Statistics and Data Sciences – Labelled "Core IA" by MIAI
  - Bayesian statistics
  - Computational statistics: bootstrap, Monte Carlo, permutation
  - Non-parametric and functional estimation
  - Operations research and optimization
  - Spatial statistics (stochastic processes)
  - Supervised learning: Neural Networks, random forest, Support Vector Machine

- **2021 – 2022 Université Grenoble Alpes – IM²AG**
  1st year Master's in Statistics and Data Sciences – Labelled "Core IA" by MIAI
  - Probability, inferential statistics and statistical tests
  - Time series analysis
  - Unsupervised - *hierarchical clustering, k-means* - and supervised - *(G)LM, kNN, LDA/QDA, Lasso/Ridge/Elastic-Net* - learning

- **2011 – 2014 Grenoble INP – Phelma / Ensimag**
  Engineering degree "Internet, Services and Connected Systems"

ACADEMIC AND PROFESSIONAL EXPERIENCE

- **March 2023 – Aug. 2023 Research Internship – MAGe team of TIMC – Grenoble**
  "Exploration of joint deconvolution algorithms for omic data" – 2nd year Master's – *report*
  - Constructed and ran a comprehensive benchmark to evaluate deconvolution pipelines
  - Introduced and evaluated two novel multi-omics integration strategies
  - Presented a poster at JOBIM and ISMB conferences

- **Nov. 2022 – Feb. 2023 Tutored project – 2nd year Master's**
  - Effect of human disturbance on narwhals feeding
    * Used of Poisson process, GLM and mixed-models for modelling
    * Constructed confidence intervals through a Monte Carlo procedure
  - Estimating the age of narwhals from their tusk grooves
    * Modelling by a double sine composed with a Ornstein-Uhlenbeck process
    * Identifiability simulation using SAEM algorithm with a MCMC step

- **May 2022 – Aug. 2022 Research Internship – DAO team of LJK – Grenoble**
  "Deep generative learning for next-generation drugs" – 1st year Master's – *report*
  - Extended a 2D image inpainting CNN to 3D and drugs generation tasks
  - Used an invariant ligand-protein complex representation based on oriented residue density grids
  - Implemented using PyTorch library

- **Sept. 2016 – Aug. 2021 Engineer – DANCE team (CNRS / Inria) – Grenoble**
  - Developed, deployed and maintained applications for collecting, estimating and predicting road traffic indicators in real time in the Grenoble Metropolis via the use of models designed by members of the team
    * http://gtl.inrialpes.fr (stable)
    * http://gtlville.inrialpes.fr (experimental)
  - Collaborated with PhD / post-doctoral students and supervised interns
    * Built a dynamic partition model – based on nodes' state – of a road network to estimate travel times through the obtained partitions – *paper*
  - Wrote technical documentation for the opening of a public tender to collect traffic data

1994
First snowplows
1996
Judo white belt
1998
Initiation to rugby

2007
Sport-study rugby program

2012
3 months in Australia
2014
Switch to ski touring
2015
2 months around the Balkans
2017
Transition to Touch rugby
2019
Rediscover chess
2020
1st diving level
2021
Join the french M30 touch rugby selection
2023
Silver medal at the European Touch Championships

Languages
English   Fluent
Spanish   Notions

Miscellaneous
Python, R, Julia
LaTeX
Git
Shell scripting