

Alex Bujan

COMPUTATIONAL NEUROSCIENTIST · DATA SCIENTIST

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Summary

- 8+ years of international research experience and interdisciplinary training in Biophysics, Computer Science, and Data Analysis
- Experienced in large-scale data analysis and machine learning
- Strong team player with excellent communication skills
- Currently seeking a job as data scientist with special interest in the healthcare sector
- Current interests: building highly scalable systems using machine learning and artificial neural nets
- US permanent resident

Programming Skills

Python SciPy, NumPy, Matplotlib, H5Py, Matlab/Octave, R	Scientific Programming
Scikit-learn, Theano, TensorFlow	Machine Learning
MPI4Py, PySpark	Parallel Computing
HDF5, MySQL, PostgreSQL	Databases
LaTeX, Jupyter Notebooks, GitHub	Communication and Sharing
Java, C/C++	Other Programming Languages

Experience

Postdoctoral Researcher

Feb 2015 - Present

UC BERKELEY

Berkeley, US

- Developed novel unsupervised machine learning methods
- Applied machine learning and signal processing techniques to the analysis of brain data (ECoG)
- Optimized a machine learning framework to be executed in high-performance computing environments
- Reviewed articles for scientific/engineering journals

Doctoral Researcher

Apr 2010 - Jan 2015

UNIVERSITY OF FREIBURG

Freiburg, Germany

- Performed large-scale simulations of biological/spiking neural networks
- Applied data mining and signal processing techniques to the analysis of neural data
- Performed mathematical modeling of neural networks
- Published articles in high impact scientific journals
- Taught and supervised undergraduate and graduate level students

Education

Doctor of Philosophy (Ph.D.), Computational Neuroscience, Magna Cum Laude

2015

UNIVERSITY OF FREIBURG

Freiburg, Germany

Master of Science (M.Sc.), Computer Science, with Merit

2009

UNIVERSITY OF BIRMINGHAM

Birmingham, UK

Licenciatura (B.Sc.), Biology

2007

UNIVERSITY OF MADRID

Madrid, Spain

Relevant Publications

On degeneracy control in overcomplete ICA

arXiv

ALEJANDRO F. BUJAN, LIVEZEY, JESSE A., AND FRIEDRICH T. SOMMER

2016

Sparse components of sensorimotor ECoG signals are relevant for speech control

CoSyNe

ALEJANDRO F. BUJAN, KRISTOFER E. BOUCHARD, AND FRIEDRICH T. SOMMER

2016

Role of input correlations in shaping the variability and noise correlations of evoked activity in the neocortex

J Neurosci

ALEJANDRO F. BUJAN, AD AERTSEN, AND ARVIND KUMAR

2015

Communication through resonance in spiking neuronal networks

PLoS Comput Biol

ALEJANDRO F. BUJAN, GERALD HAHN, YVES FREGNAC, AD AERTSEN, AND ARVIND KUMAR

2014