

ARTHUR BAUVILLE

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SUMMARY

Researcher with six years of experience in computational Earth Sciences looking to leverage skills in machine learning, data analysis and numerical simulation as a data scientist.

SKILLS

Programming languages: Python, C, MATLAB, Javascript, GLSL

Libraries: PyTorch, OpenCV, Pandas, scikit-learn, scipy

Techniques: Finite element, computer vision, neural networks, data visualization, supervised & unsupervised learning, web scraping

EXPERIENCE

JAPAN AGENCY FOR MARINE-EARTH SCIENCES AND TECHNOLOGY – Yokohama, Japan

Researcher

Jul 2017 – Present

External researcher

Jan 2016 – Jul 2017

- Developed simulation code that utilizes the UNIX supercomputer cluster (C, Python, openMP, OpenGL)
- Performed data visualization, data analysis of simulation unstructured data (>1 TB)
- Advised researchers on statistical methods, machine learning and simulation
- Raised 120,000€ in academic grant to support academic research and student training
- Wrote and presented scientific publications and grants in international journals and conferences
- Organized a Germany-Japan joint collaboration which resulted in a Master thesis and a scientific publication

UNIVERSITY OF MAINZ – Mainz, Germany

Post-doctoral researcher

Dec 2014 – Dec 2015

- Developed a program to speed up and improve the design of 3D numerical simulations
- Taught numerical simulation methods (Finite-element), geodynamics and machine learning
- Used unsupervised learning (principal component analysis) to determine the origin of mantle rocks in Europe. This study is highly regarded and has been cited ~50 times.

PROJECTS

WAIDATATHON 2021, Winner, 1500 \$

- Generated personalized questionnaires with machine learning (decision tree) to detect women at risk of domestic violence
- Formulated the problematics, distributed tasks, assembled and presented the results
- Performed data cleaning, mining, and modeling (Python, matplotlib, plotly, sklearn, github)

EDUCATION

UNIVERSITY OF LAUSANNE – Lausanne, Switzerland

Nov 2014

PhD. In Earth Sciences

UNIVERSITY OF GRENOBLE – Grenoble, France

Jun 2010

MSc. In Earth Sciences

UNIVERSITY OF TOURS – Tours, France

Jun 2008

BSc. In Earth Sciences

ADDITIONAL

Languages: French, English, Japanese

Scientific publications: 16 peer-reviewed articles, ~200 citations