

# ARTHUR BAUVILLE

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## SUMMARY

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

## PROJECTS

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### 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)

## SKILLS

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**Programming:** Python, C, MATLAB, Javascript, GLSL, Pandas, scikit-learn, scipy, PyTorch

**Techniques:** Finite element, data visualization, supervised & unsupervised learning, neural networks, recommender systems, web scraping

## EXPERIENCE

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### 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.

## EDUCATION

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### 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

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**Languages:** French, English, Japanese

**Certifications & Training:** Data Scientist Certificate (Datacamp)