



# Wesley Banfield

Unconventional Thinker - Geologist - Software Engineer



## Contact

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## Web & Git

LinkedIn  
Github

## Technologies

Jupyter ★★★★★  
Orange ★★★★★  
Plotly/Dash ★★★★★  
Sklearn ★★★★★  
Docker ★★★★★  
Microsoft PowerApps / Flow ★★★★★

## Languages

Python ★★★★★  
C++ ★★★★★  
L<sup>A</sup>T<sub>E</sub>X ★★★★★

## Geological Software

LeapFrog ★★★★★  
CCG ★★★★★  
Skua ★★★★★  
QGIS ★★★★★  
Supervisor ★★★★★

## Experience

- 01/17 - Now **Research Engineer** [Seequent, Chirstchurch New Zealand](#)  
Regularly called upon by key decision makers to aid define the core strategies of the company by providing technical expertise. A considerable amount of horizon 3 prototyping work is also carried out testing technical feasibility and workflows.  
**Infill drilling** conception of idea, implementation of backend, project coordination. Optimisation of where drilling needs to occur in mines to return most revenue with least cost. Cloud based processing set off from Iview  
**Drill hole sensitivity analysis** conception and implementation of workflow. Presentation of work, to clients, at Perth Lyceum. Creation of multiple models removing drill-holes and rebuilding implicit model.  
**Automatic drill hole error detection** Supervision of SENG402 student. Chrome extension sets of machine learning algorithms in cloud deployed container.  
**Processing metrics** Creation of infrastructure to extract, store and analyse key processing metrics of Leapfrog. Analysis of results to understand compute intensive tasks.  
**Dashboard Creation** Implementation of web based dashboard solutions for groundwater monitoring. Collaboration with ECan and WRD, California.  
Reference : Tim Schurr, Solutions Architect
- 05/16 - 19/16 **Software Integration Engineering Internship** [Total, Pau France](#)  
Interfacing with RINGMesh library for dynamic remeshing during coupled geomechanic - flow simulation workflows.  
Reference : Tristan Cornu, Pore pressure and Rock Mechanics Specialist
- 02/16 - 05/16 **Research Intern** [Ring Research Lab, Nancy France](#)  
Research and implementation of different automatic simultaneous well log correlation algorithms and creation of a SKUA-Gocad plugin, a program originally developed in house before commercialisation by Paradigm. The work was presented and published in the 2016 Ring Meeting.  
Reference : Guillaume Caumon, Head of Research team
- 06/15 - 09/15 **Software Engineering Internship** [Seequent, Chirstchurch New Zealand](#)  
Design and development of a graphical user interface for geostatistical analysis in Leapfrog 3D Geological modelling suite, later integrated into Leapfrog EDGE. Implementation of different geostatistical algorithms.  
Reference : Tim McLennan
- 09/14 - 05/15 **Lab Research Project** [GeoResources, Nancy France](#)  
Oil age dating using Rhenium / Osmium. Designing experimental methods and analysing ICP MS results.  
Reference : Raymond Michels

## OS Preference

GNU/Linux ★★★★★  
Unix ★★★★★  
MacOS ★★★★★  
Windows ★★★★★

## Places Lived



## Languages

Italian ★★★★★  
English ★★★★★

## Education

2013 - 2016 **Masters in Geological Engineering with specialisation in Numerical Geology and Oil & Gas Engineering** [French National School of Geological Engineering](#)  
Ecole National Supérieur de Geologie is a leading French engineering school specialising in geosciences and delivering a 5 year University Diploma as well as a Masters from the University of Lorraine.

*Curriculum:* Oil and Gas Engineering and Numerical Geolgy.

*Main subjects:* Structural Geology, Petroleum Systems, Sedimentology, Geomechanics, Mathematical concepts of geomodelling, Software Development, Interface Design, Computer Geometry, Visualisation and Parallelism, Finite Elements.

*Title of Thesis:* "Current automatic well log correlation techniques, their advantages and drawbacks". *Relators:* Prof. Guillaume Caumon, Jonathan Edwards

2011 - 2013 **Classes Préparatoire aux Grandes Ecoles** [Lycee Pierre de Fermat, Toulouse France](#)

2 years of intensive general scientific courses before national exams for entry to the French Grandes Ecoles, carried out in Pierre de Fermat, one of the top prep classes, 6 / 52

*Main subjects:* Geology, Matematics, Physics, Chemistry and Biology.

## Publications

Author, Author, Author

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## Honors & Awards

10/2015

**Best swordsman duel**

[Contest](#)

Lorem ipsum.

*Lorem ipsum*

## Certifications

02/2013

**Intro to Computer Science**

[Udacity. E-learning](#)

*Building a Python Search Engine*

## Other Info

For the Italian job market:

*Si autorizza il trattamento delle informazioni contenute nel curriculum in conformità alle disposizioni previste dal d.lgs. 196/2003. Si dichiara altresì di essere consapevole che, in caso di dichiarazioni non veritiere, si è passibili di sanzioni penali ai sensi del DPR 445/00 oltre alla revoca dei benefici eventualmente percepiti.*

May 8th, 2016

*John Snow*