

# Guillaume Sanchez

Software Engineer

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📁 [Vermeille.fr](http://Vermeille.fr)

*Passionate computer scientist, mostly interested in Natural Language Processing and other AI technologies*

## Cursus

- 2015 **Internship at Facebook, Menlo Park (CA)**, Natural Language Understanding, Command & Control. developed a framework for Command a Control almost from scratch based on a CRF and a bag of word.
- 2015 **Internship at Google, London (UK)**, ART's optimizing compiler, various optimizations. 40% speed up on MonteCarlo benchmark with 'division by integral constants' algorithm, fixed ARM opcodes generation, improved types handling and null detection
- 2014 **Teacher assistant**, Gave lectures and directed workshops about C/C++ and the STL and Unix. I also did some unofficial talks about best practices, Haskell, metaheuristics, game programming, introduction to JIT compiling.
- 2013 **Internship at Facebook, Menlo Park (Silicon Valley)**, Wormhole: wrote a dynamic multisource multithreaded configuration manager, Used in production today.
- 2010 **Computer Science college**, French engineering school.

## Experiences

### Spare-time Projects

- 2015 **Autodiff, Deep Learning**, A Differentiable Programming library in C++ running on GPU (CUDA), used mostly for my Deep Learning experiments. Includes various Neural Networks features like LSTMs, GRUs, Highway Networks, etc..
- 2015 **Talkr, NLP**, A set of experiments revolving around the ultimate goal to make services conversation enabled with chatbots or speech frontends. Also includes POS tagging (more generally, sequence tagging), sequence classification, seq2seq models, and various state-of-the-art models. Based on Autodiff..
- 2015 **Reddit-BoW, NLP**, A Bag of Words based HTTP service + Android app that learns to classify Reddit articles I might like or not.
- 2012 **Logic, Haskell**, A propositional logic theorem prover.
- 2011 **Gamulator, C++11**, A Gameboy emulator.

## Languages

Proficient C, C++  
Experienced Haskell

Strength good C++(11/14) knowledge  
Prior Java, Python, Php, HTML, CSS  
Experience

## MOOCs (completed or currently enrolled in)

- Machine Learning (Andrew Ng, Coursera)
- Deep NLP (Richard Socher, Stanford)
- Deep Learning (Google, Udacity)
- Deep Learning (Nando de Freitas, Oxford)
- Natural Language Processing (Jurafsky, Manning)
- Parallel Programming with CUDA (NVIDIA, Udacity)

## Talks

- Metaheuristics and genetic algorithms (2013)
- Interpreters, compilers and JIT (2015)
- Haskell (2014)
- Differentiable Programming (2016, expected)

## Miscellaneous

### On my spare time

- Functional Programming
- Social psychology
- Information theory
- Improving communication skills (persuasion, public speaking, etc)
- x86 programming
- Probability / Statistics
- <http://bitbucket.org/Vermeille>
- <http://github.com/Vermeille>