

Adrien Ball

Principal Machine Learning Engineer

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Experience

- 2021 – **Principal Machine Learning Engineer**, *Sonos*, Paris
- Present Leading the development of an end-to-end evaluation framework for Sonos Voice Control technology.
- Owning the packaging and integration of ML components into the evaluation framework
 - Building an infrastructure able to efficiently scale training and inference jobs on thousands of nodes
 - Designing, implementing and storing ML metrics for fast and flexible access
- 2019 – 2021 **Senior Machine Learning Engineer**, *Sonos*, Paris
- Leading the development of the engineering infrastructure used by ML researchers in the Sonos Voice Control team to train and evaluate the ASR and NLU models.
The SVC team released the first version of the Sonos Voice Control technology to millions of households.
- 2018 – 2019 **Senior Machine Learning Engineer**, *Snips*, Paris
- Owning the creation and development of the Natural Language Understanding (NLU) component of the Snips voice recognition platform.
- Leading the snips-nlu library open source initiative (4k+ stars on github to date)
 - Focusing on ML algorithms designed for on-device processing: inference implementation in Rust
 - Contributing to 2 scientific publications with 1,000+ citations to date
- Snips was acquired by Sonos in November 2019 to build their privacy-first voice assistant for music control.
- 2015 – 2018 **Machine Learning Scientist**, *Snips*, Paris
- Working on natural language understanding to build a context-aware technology for mobile applications.
- Implementing graphical models – Conditional Random Fields – for both iOS (Swift) and Android (kotlin) to perform Named Entity Recognition
 - Integrating ML algorithms on the Snips mobile SDK

Computer skills

| | | | |
|--------|--|------------|------------------------------|
| coding | Python, Rust | frameworks | FastAPI, Pydantic |
| ML | PyTorch, scikit-learn | tooling | git, GitHub Actions, Jenkins |
| devops | Docker, Kubernetes, AWS (S3, SQS, EFS) | | |

Education

- 2012 – 2013 **M.Sc. in Probabilities and Finance (formerly DEA El Karoui)**, *École Polytechnique & Sorbonne Université*, Paris
- Elite program in probability, stochastic processes, and quantitative finance, renowned for its rigor and industry impact.
- 2009 – 2012 **B.Sc. in Applied Mathematics**, *École Polytechnique*, Palaiseau
- France's leading institution for science and engineering, combining rigorous mathematical training with multidisciplinary research and a strong emphasis on innovation and leadership.
Focus on applied mathematics, probabilities and computer science.
- 2007 – 2009 **Prépa MP***, *Lycée Saint Louis*, Paris
- Intensive scientific training for the challenging "Grandes Écoles" national exams

Languages

| | |
|---------|--------------|
| French | Native |
| English | Fluent |
| Spanish | Intermediate |

Activities

- Sports Running and Soccer
- Side projects github.com/adrienball/2048-rs: A rust implementation of the famous 2048 game with an AI solver