

# Simon Roburin

*Ph.D student in Deep Learning*

Paris, France

+33-6-09-35-22-34

✉ [simon.roburin@gmail.com](mailto:simon.roburin@gmail.com)

## Education

- 2019-Now **Ecole des Ponts Paris Tech (ENPC), *Ph.D in Deep Learning***.  
Under the supervision of Mathieu Aubry (ENPC), Patrick Pérez (valeo.ai) and Renaud Marlet (valeo.ai).  
*Subject:* Regularization and Generalization in Deep Learning.  
*Keywords:* optimization, robustness, generalization, signal processing, uncertainty, network compression, network comparison.
- 2013-2017 **Ecole Centrale Paris, *Bsc. in Engineering & Msc. Top three engineering school in France majoring in Applied Mathematics (GPA: 3.9)***.  
Bsc. in General Engineering. Focus on quantum physics, thermodynamics, biology, statistics, probabilities, computer science, finance, management and entrepreneurship.  
Msc. directed by Nikos Paragios. Focus on machine learning (G.Charpit), deep learning (I.Kokkinos), optimization (A.D'Aspremont), functional analysis (A.Rozanova-Pierrat) and stochastic calculus (E. Herbin).  
Full courses list [here](#).  
*Acquired a strong multidisciplinary background in science and specialized in machine learning.*
- 2010-2013 **University of Paris, *Bsc. in Mathematics obtained with Highest Honors, Valedictorian of the class (1st/260, GPA: 4.0)***.  
Focus on fundamental mathematics: algebra, measurement theory, topology, differential calculus, geometry, complex analysis and probabilities.  
*Acquired a theoretical background in mathematics.*

## Honors and Awards

- 2013 **The Foundation Sciences Mathematiques de Paris (FSMP)**, Laureate of the Paris Graduate School of Mathematics.  
Each year the foundation grants a **€26** master scholarship to the **top 10 best mathematics students in France**.

## Work Experience

- Jan **valeo.ai, *Ph.D student***, Paris, France.
- 2019-Now International research center in Deep Learning for automotive applications supervised by Patrick Pérez. Main research topics include domain adaptation, robustness, uncertainty, multi-sensor prediction.
- Management of research project involving senior members of the team which lead to an NIPS2020 submission as first author.
  - Presentation of research works and topics to top level managers of the company.

- July 2018-Jan 2019 **Aquabyte, Deep Learning Engineer**, San Francisco, United States, CA.  
 Startup applying machine learning to aquaculture.
  - Creation of a biomass estimation algorithm for fishes from images integrating uncertainty estimation.
  - Implementation of a full semantic segmentation pipeline for fish segmentation.
  - Coordination of data acquisition in Norway, work on the field with an optical engineer to set up underwater cameras.
- Dec 2017-Jun 2019 **Prophesee, Deep Learning Intern Researcher**, Paris, France.  
 Startup developing neuromorphic vision system with event based cameras.
  - Creation of a recurrent neural network architecture to handle asynchronous time series of sparse images produced by the event based camera.
  - Work on unsupervised algorithm for gesture detection in Renault cars using datas from the event based camera.
- Sep 2016-Mar 2017 **Bouygues Telecom Datalab, Part time Data Scientist Intern**, Paris, France.  
 Top 3 french mobile network provider.
  - Improvement of customer's behavior model with a NLP approach.
  - Development of an automatic scraping bots to parse online medias and social networks.
- Feb 2016-Jun 2016 **Yubo app, Data Scientist Intern**, London, UK.  
 Well funded startup, 25M users, social network.
  - Development of semi-supervised computer vision algorithm to perform moderation of live streamed videos.
  - Creation of a scoring model to detect aggressive behavior.
- Sep 2015-Jan 2016 **SMG Crédit Suisse, Quantitative Intern**, Paris, France.  
 Trading algorithmic desk under the supervision of Laurent Laizet.
  - Creation of a back test tool to evaluate trading strategies following index re balancing.
  - Creation of a successful automated trading strategy using feature extraction and clustering methods.

## Languages

- French Native.  
 English Fluent (TOEFL ibT: 620).  
 Spanish Conversational.

## Software Skills

- Languages Proficient in **Python**.  
 Libraries pytorch, tensorflow, keras, scikit-learn, matplotlib, numpy, pandas.  
 Others Docker, Linux, Git.

## Interests

- Sports Thai Boxing, Brazilian Jiu Jitsu, MMA, Outdoors.  
 Others Piano classical and jazz, Literature, Philosophy, Traveling.