

# Yunlong Jiao

## Machine Learning Scientist

### ABOUT ME

I am a machine learning scientist passionate about uncovering hidden patterns in data and advancing innovative technologies through AI. I am particularly skilled in representation learning and generative probabilistic modelling with large-scale complex data.

### WORK EXPERIENCE

#### Machine Learning Scientist

*Amazon, Cambridge, UK*

CURRENT, FROM NOV 2019

- Neural Text-to-Speech with deep generative models.

#### Postdoctoral Research Scientist

*University of Oxford, Oxford, UK*

NOV 2017 – OCT 2019

- Methodological ML on scalable multi-view learning with massively and structurally missing data.
- Applied ML/statistics in medical biology on: **1)** Trajectory analysis for complex chronic disease progression. **2)** Longitudinal and multi-dimensional omic data integration. **3)** Collaborative filtering-based comorbidity inference with healthcare AI application.

#### Doctoral Researcher

*Mines ParisTech & Institut Curie, Paris, France*

SEP 2013 – SEP 2017

- Methodological ML on: **1)** Representation learning with highly structured data (incomplete rank data and graph signal processing). **2)** The profound implication of these representations in kernel-based ML methods, sparsity regularisation, social choice theory.
- Bioinformatics applications on: **1)** Improved molecular prognosis of breast cancer. **2)** Robust biomarker discovery guided by biological networks.
- Thesis deliverables including: **1)** Several high-impact publications in top ML conferences/journals. **2)** A kernel-based ML toolkit (written in R/C++) for analysing rank data and solving biomedical tasks.

#### Visiting Researcher

*Centro de Investigación Príncipe Felipe, Valencia, Spain*

MAR 2016 – JUN 2016

- Project on data-driven feature extraction based on network analysis of signalling pathway activities, leading to interpretable feature selection for improved breast cancer survival prediction.

#### Data Analyst Intern

*Roche Diagnostics GmbH, Penzberg, Germany*

APR 2015 – JUN 2015

- Project on failure state prediction and preventive maintenance alerts for automated analysers by monitoring machinery routine performance and mining large-scale unstructured data.
- Core contribution to the [US patent 16416844](#).

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[github.com/YunlongJiao](https://github.com/YunlongJiao)

### EDUCATION

#### 2013 – 2017 Doctor of Philosophy

Centre for Computational Biology  
*Mines ParisTech, Paris, France*

#### 2012 – 2013 Master of Science (HIGHEST MENTION)

Department of Mathematics  
*University of Paris XI, Orsay, France*

#### 2008 – 2012 Bachelor of Science (FIRST CLASS HONOURS)

Department of Mathematics  
*University of Science & Technology of China*

### AWARDS & DISTINCTIONS

JAN 2019 **Volunteer Tutor** (with Prof. J.-P. Vert)  
at the African Master's in Machine Intelligence

2013 – 2016 **Early Stage Researcher Fellowship**  
in Machine Learning for Personalised Medicine  
funded by the EU 7th Framework Programme

NOV 2013 **Runner-up** (team collaboration)  
in DREAM 8 Toxicogenetics Challenge

AUG 2011 **Honorable Mention** (top 15 nationwide)  
in S.-T. Yau College Student Mathematics  
Contest – Probability and Statistics Sector

### PROFESSIONAL SKILLS

PROGRAMMING	Python (MXNet, PyTorch), R, C++, Bash
BIG DATA	Parallel Computing (CUDA), SQL
ML/STATISTICS	Neural Text-to-Speech, Deep Generative Models (Flows, VAEs), Kernel Methods (Gaussian Processes), Time Series Forecasting, Computational Biology

### LANGUAGES

NATIVE	Chinese
FULLY PROFICIENT	English (CEFR Certified Level C2)
CONVERSATIONAL	French (Level A2), Spanish (Level A2)

### SELECTED PUBLICATIONS

CONFERENCES **ICML** 2018 [🔗](#) / 2016 [🔗](#) / 2015 [🔗](#)

JOURNALS **IEEE TPAMI** 2018 [🔗](#)  
**Molecular Informatics** 2017 [🔗](#)

*All selected publications are first-authored.*