# Yiyang Yu

*Ph.D. in Applied Mathematics*

London, UK
✉ yiyangyu2018@gmail.com
⌨ yiyang-yu.github.io
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○ yiyang-yu

## Employment

**2022 – now**  **Machine Learning Engineer**, *Meta*, London, UK.
- Working within Instagram Relevance Feed Ranking, and Creator Ranking teams

## Education

**2018 – 2022**  **Ph.D in Applied Mathematics**, *LPSM, Université Paris Cité (Paris 7)*, Paris, France.
- Thesis: *Deep Learning in public health, and contributions to Machine Learning*. Link manuscript
- Areas of research: statistics, learning theory, deep learning and applications in healthcare
- Jointly advised by Prof. Stéphane Gaïffas (LPSM, Université de Paris) and Prof. Emmanuel Bacry (CEREMADE, Université Paris-Dauphine)

**2017 – 2018**  **Master 2 Mathematics, Computer Vision, Machine Learning (M2 MVA)**, *ENS Paris-Saclay*, Cachan, France, *obtained with honors*.
- Main courses: statistical learning, probabilistic graphical models, reinforcement learning, convex optimization, high-dimensional statistics, signal processing

**2014 – 2018**  **Ingénieur Polytechnicien**, *École polytechnique*, Palaiseau, France.
- Engineering degree and M.Sc. in Applied Mathematics, multidisciplinary scientific studies

## Publications

**2021**  **WildWood: a new Random Forest algorithm**. Accepted for publication in *IEEE Transactions on Information theory*. Joint work with I.Merad, S.Gaïffas. Link arXiv
- Python implementation `https://github.com/pyensemble/wildwood`

**2020**  **About contrastive unsupervised representation learning for classification and its convergence**. Joint work with I.Merad, E.Bacry, S.Gaïffas. Link arXiv

**2020**  **ZiMM: a deep learning model for long term and blurry relapses with non-clinical claims data**, published in *Journal of Biomedical Informatics*. Joint work with A.Kabeshova, B.Lukacs, E.Bacry, S.Gaïffas. Link arXiv

## Skills

Programming  Python, R, MATLAB, OCaml
ML toolkit  PyTorch, TensorFlow, pandas, scikit-learn, PySpark
Tools  git, LaTeX

## Honors and fellowship

**2018 – 2021**  **DIM Math Innov Ph.D. fellowship**, *Foundation Sciences Mathématiques de Paris*.
- Full funding for Ph.D. studies

**2017 – 2018**  **Sophie Germain Master scholarship**, *Mathematics Foundation Jacques Hadamard*.

## Academic activities and teaching

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|---|---|
| 2020, 2021 | **Reviewer**, *Machine Learning for Health Workshop*, NeurIPS - ML4H. |
| 2019 – 2020 | **Co-organizer of Ph.D. students seminar**, *GTT*, LPSM. |
| 2019 – 2020 | **Teaching Assistant**, *Université de Paris*, Paris, France. |
| | ○ Probability (18h), Statistical inference (42h) for third-year Bachelor students |
| 2015 – 2016 | **Teaching Assistant**, *Lycée Hoche*, Versailles, France. |
| | ○ Provided weekly oral examinations in mathematics for undergraduate students |
| 2014 – 2015 | **Volunteer Tutor**, *Lycée polyvalent Fernand et Nadia Léger*, Argenteuil, France. |
| | ○ Teaching assistant for high school students from underprivileged backgrounds |

## Miscellaneous

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| Languages | English (fluent), French (fluent), Chinese (native), Japanese (notions) |
| Interests | bouldering, tennis, guitar, hiking |