

Houssam Zenati

MACHINE LEARNING PHD CANDIDATE

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Education

Université Grenoble Alpes

PHD IN COMPUTATIONAL AND APPLIED MATHEMATICS

- Counterfactual Logged Bandit, Contextual Bandits, Slate Selection, Adversarial Multi-armed Bandits

Grenoble, France

July 2020 - Present

École Normale Supérieure Paris-Saclay

M.Sc. IN COMPUTATIONAL AND APPLIED MATHEMATICS

- MVA - Convex Optimization, Probabilistic Graphical Models, Deep Learning, Computer Vision

Paris, France

Sept. 2018 - Dec. 2019

École Centrale Paris

M.ENG./B.ENG. IN APPLIED MATHEMATICS

- Statistical Learning, Bayesian Learning, Reinforcement Learning, Algorithms, Software Engineering. B.Eng. obtained in Sept. 2016

Paris, France

Sept. 2015 - Dec. 2019

Lycée Louis Le Grand

PREPARATORY CLASSES (CPGE MPSI/MP*)

- Fundamental Mathematics, Physics, Engineering and Computer Science: General Algebra, Linear Algebra, Numerical Analysis

Paris, France

Sept. 2013 - July 2015

Experience

INRIA & Criteo

PHD STUDENT, JUNIOR RESEARCHER

- Counterfactual Logged Bandit, Contextual Bandits, Adversarial multi-armed Bandits

Grenoble, France

April 2019 - Present

IBM Research, AI

RESEARCH INTERN, REINFORCEMENT LEARNING

- Deep Reinforcement Learning: learning control policies for constrained robotics problem

Tokyo, Japan

June 2018 - August 2018

Institute for Infocomm Research, A*STAR

RESEARCH INTERN, COMPUTER VISION, DEEP LEARNING

- Unsupervised Anomaly Detection using Deep Generative Models, Semi-supervised Learning, Saddle-point Optimization problems

Singapore

Aug 2017 - May 2018

Research

CONFERENCE PAPERS

- | | | |
|------|--|-----------------|
| 2023 | International Conference on Machine Learning , Zenati, H., Diemert E., Martin, M., Mairal J. and Gaillard, P. 2023, <i>Sequential Counterfactual Risk Minimization</i> , | Hawaii, US |
| 2022 | International Conference on Machine Learning , Martin, M., Mertikopoulos, P., Rahier, T. and Zenati, H. 2022, <i>Nested Exponential Weights and the Red Bus / Blue Bus Paradox ICML 2022</i> | Baltimore, US |
| 2022 | International Conference on Artificial Intelligence and Statistics , Zenati, H., Bietti, A., Diemert, E., Mairal J., Martin, M., and Gaillard, P. 2022, <i>Efficient Kernel UCB for Contextual Bandits, AISTATS 2022</i> | Virtual |
| 2020 | ArXiv Preprint , Zenati, H., Bietti, A., Diemert, E., Mairal J., Martin, M., and Gaillard, P. 2020, <i>Counterfactual Learning of Stochastic Policies with Continuous Actions: from Models to Offline Evaluation</i> , | |
| 2019 | International Conference on Learning Representations , Mertikopoulos, P., Lecouat, B., Zenati, H., Foo, C.S., Chandrasekhar V. and Piliouras G. 2018, <i>Optimistic mirror descent in saddle-point problems: Going the extra(-gradient) mile, ICLR 2019</i> | New Orleans, US |
| 2018 | International Conference on Data Mining , Zenati, H., Romain, M., Foo, C.S., Lecouat, B. and Chandrasekhar V. 2018, <i>Adversarially Learned Anomaly Detection, in the Proceedings of IEEE ICDM 2018 [Code]</i> | Singapore |

WORKSHOP PAPERS

- 2020 **International Conference on Learning Representations**, Zenati, H., Bietti, A., Martin, M., Diemert, E. and Mairal J. 2020, *Optimization Approaches for Counterfactual Risk Minimization with Continuous Actions*, ICLR 2020, CDLM Workshop Addis Abada,
Ethiopia
- 2019 **International Conference on Medical Image Computing and Computer Assisted Intervention**, Ouardini, K., Yang, H., Unnikrishnan, B., Romain, M., Garcin, C., Zenati, H., Campbell, P., Chiang, M., Kalpathy-Cramer, J., Chandrasekhar, V., Krishnaswamy, P., Foo C.S. 2019, *Towards practical unsupervised anomaly detection on retinal images*, MICCAI 2019, Workshop Shenzhen, China
- 2018 **Neural Information Processing Systems**, Lecouat, B., Chang, K., Foo, C.S., Unnikrishnan, B., Brown, J., Zenati, H., Beers, A., Chandrasekhar, V., Kalpathy-Cramer, J. and Krishnaswamy, P. 2018, *Semi-Supervised Deep Learning for Abnormality Classification in Retinal Images*, NeurIPS 2018, ML4H Workshop Montréal, Canada
- 2018 **International Conference on Learning Representations**, Lecouat, B., Foo, C.S., Zenati, H. and Ramaseshan V. 2018, *Semi-Supervised Learning With GANs: Revisiting Manifold Regularization*, ICLR 2018, Workshop Track Vancouver, Canada
- 2018 **Arxiv Preprint**, Zenati, H., Lecouat, B., Foo, C.S., Manek, G. and Chandrasekhar V. 2018, *Efficient GAN-Based Anomaly Detection*, Submitted to ICLR Workshop 2020 **[Code]**

Awards

- 2018 **IEEE ICDM**, Student Travel Award Singapore
- 2017 **SIPGA**, Awardee of Singapore International Pre-Graduate Award Singapore

References

Academic Supervisors.

Julien Mairal,

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Pierre Gaillard,

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Industrial Supervisors.

Eustache Diemert,

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Senior researchers.

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