

Vitalii Emelianov

Ph.D. in Computer Science

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Professional Experience

- Aug. 2024 — **Postdoctoral Researcher**, *University of Udine*, Italy.
ongoing Topic: Computer vision for food nutrition prediction
- Nov. 2022 — **Postdoctoral Researcher**, *Inria-Lille*, France.
- Jun. 2024 Topic: Fair and privacy-preserving machine learning; Personalization in federated learning
- Feb. 2018 — **Research Intern**, *Inria-Grenoble*, France.
Jul. 2018 Topic: Fairness in multistage decision-making
- Sep. 2016 — **Analyst**, *Sberbank-Technology*, Moscow, Russia.
Jul. 2017 Company-relevant data science and computer vision tasks

Education

- 2018 — 2022 **Ph.D. in Computer Science**, *University of Grenoble*, France.
Thesis: Fairness in selection problems
◦ three publications in peer-reviewed international conferences, and one publication in a peer-reviewed international journal
◦ intern supervision
- 2017 — 2018 **M.Sc. in Industrial and Applied Mathematics**, *University of Grenoble*, France.
Highest honors: “mention très bien”
Track: Data science
◦ machine learning and computer vision
◦ convex and distributed optimization
- 2016 — 2018 **M.Sc. in Applied Mathematics and Physics**, *Moscow Institute of Physics and Technology*, Russia.
◦ principles of software design
◦ technologies for Big Data analytics
◦ programming in Java
- 2011 — 2016 **B.Sc. in Applied Mathematics and Physics**, *Moscow Institute of Physics and Technology*, Russia.
◦ mathematical analysis
◦ object-oriented programming
◦ Python and C++
◦ general and theoretical physics

Skills & Competences (1/2)

- Programming Python (proficient), Java, C/C++ (familiar)
- Machine learning scikit-learn, SciPy, PyTorch, PyTorch Lightning
- MLOps Weights & Biases, MLflow
- Data science Matplotlib, seaborn, NumPy, pandas, SQL

Skills & Competences (2/2)

Containers Docker
Productivity Git, JIRA

Languages

English Full professional proficiency
French Limited working proficiency
German Elementary proficiency
Italian Elementary proficiency
Russian Native speaker

Publications

Preprints

2024 V. Emelianov, M. Perrot. On the Impact of Output Perturbation on Fairness in Binary Linear Classification. *ArXiv Preprint*.

Peer-reviewed international conferences and journals

2025 V. Emelianov, N. Martinel. Nutrition Prediction from Food Images Using Foundation Models. *IEEE International Conference on Multimedia & Expo*.
2022 V. Emelianov, N. Gast, K. P. Gummadi, P. Loiseau. On Fair Selection in the Presence of Implicit and Differential Variance. *Artificial Intelligence Journal*.
2022 V. Emelianov, N. Gast, P. Loiseau. Fairness in Selection Problems with Strategic Candidates. *Twenty-Third ACM Conference on Economics and Computation*.
2020 V. Emelianov, N. Gast, K. P. Gummadi, P. Loiseau. On Fair Selection in the Presence of Implicit Variance. *Twenty-First ACM Conference on Economics and Computation*.
2019 V. Emelianov, G. Arvanitakis, N. Gast, K. P. Gummadi, P. Loiseau. The Price of Local Fairness in Multistage Selection. *Twenty-Eighth International Joint Conference on Artificial Intelligence*.

Professional Service & Volunteering

2024 NeurIPS Reviewer
2022 — 2023 NeurIPS Ethics Reviewer
2021 FAccT Reviewer, NeurIPS Ethics Reviewer

Conferences & Workshops

CAP'24 Conférence sur l'Apprentissage automatique, Lille, France
EC'22 ACM Conference on Economics and Computation, Boulder, USA (virtual talk)
EC'20 ACM Conference on Economics and Computation, Virtual Event
SRA'19 Social Responsibility of Algorithms Workshop, Paris, France
IJCAI'19 International Joint Conference on Artificial Intelligence, Macao