Georgios Damaskinos

London, United Kingdom
Webpage: gdamaskinos.com
E-mail: georgios.damaskinos@gmail.com

INTERESTS   Machine learning, Recommenders, Privacy, Mobile and distributed computing, Natural language processing

EDUCATION

Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland
Doctor of Philosophy, Computer Science   09/2015 - 09/2020
Thesis: "Private and Secure Distributed Learning"
     Distributed Computing Lab - Rachid Guerraoui

National Technical University of Athens (NTUA), Athens, Greece
Diploma in Electrical and Computer Engineering   10/2010 - 07/2015
(5-year academic program, equivalent to M.Sc. degree)
GPA: 9.46 / 10 (top 2%)
Major: Computer Systems, Computer Software, Computer Networks
Thesis: "Profiling and cost modeling of join algorithms for Big Data Analytics"
     Built a machine learning tool that automatically chooses the optimal engine
     (Spark, Hive, PostgreSQL) and configuration for the deployment of various join algorithms.
     Computing Systems Laboratory - Nectarios Koziris

EXPERIENCE

Meta (formerly Facebook), London, United Kingdom
Senior Machine Learning Engineer (IC5)   03/2023 - Present
Machine Learning Engineer (IC4)   10/2020 - 02/2023
Working as a Machine Learning generalist on multiple areas related to creating and productionizing deep models (data, modeling, offline evaluation, online testing, deployment) in the following fields.
- Recommender systems for e-commerce: 06/2021 - Present
  Working on product ranking for Facebook and Instagram Shops (2021 world cloud summit talk, 2022 global AI conference talk). *Language*: Python, SQL, C++
- Natural language processing for Workplace: 11/2020 - 06/2021
  Developed solutions for video understanding and personalization (paper [8], 2021 conversational AI & NLP summit panel, 2021 data innovation summit talk and interview). *Language*: Hack, Python, SQL

Software Engineering Intern   06/2019 - 08/2019
Worked on the DELF paper [5] by mainly focusing on the performance evaluation. Implemented optimizations as a result of the visibility that this evaluation provided. *Language*: Hack, SQL, Python

IBM, Zurich, Switzerland
Research Intern   06/2018 - 09/2018
Formally derived and implemented a differentially private optimization algorithm for generalized linear models, as part of the core algorithmic component of SnapML. The work continued at EPFL and led to [7].
Language: Python

Technicolor, Rennes, France
Research Intern   06/2017 - 08/2017
Designed and implemented a method to boost the evaluation of a new recommender by exploiting the output of a supposedly well-established online recommender, acting as a black-box that the new service can query. Published patent PCT/EP19/052345. The work continued at EPFL and led to [4]. *Language*: Python

Athens Clue, Athens, Greece
Web Developer   12/2014
Designed and implemented a web application for an escape room. *Language*: JavaScript, HTML, CSS

<u>High School Students</u>, Athens, Greece
Tutor   03/2012 - 06/2015
Provided complementary mathematics, physics, and programming lectures to 8 students who either needed additional help or wanted to go beyond their school curriculum and perfect their skills.

AWARDS	**Best Paper Award**, Middleware	12/2020
	Best Teaching Assistant Award, EPFL	12/2019
	Runner-up for Best Internship Award, Technicolor	11/2017
	EDIC PhD Fellowship, EPFL	04/2015
	Thomaideio Award for the 3rd best performance among graduates, NTUA	2015
	Papakyriakopoulos Award for excellence in Mathematics, NTUA	2011

PUBLICATIONS

[8] "Unsupervised Topic Segmentation of Meetings with BERT Embeddings"   06/2021
A. Solbiati, K. Heffernan, G. Damaskinos, S. Poddar, S. Modi, J. Cali
ArXiv, paper, code, video

[7] "Differentially Private Stochastic Coordinate Descent"   12/2020
G. Damaskinos, C. Duenner, R. Guerraoui, N. Papandreou, T. Parnell
AAAI 2021 and **PPML @ NeurIPS 2020**, paper, code, video

[6] "FLeet: Online Federated Learning via Staleness Awareness and Performance Prediction"   12/2020
G. Damaskinos, R. Guerraoui, A.M. Kermarrec, V. Nitu, R. Patra, F. Taiani
Middleware 2020 (**best paper award**) and **ACM TIST 2022 (journal)**
paper, code with ACM reproducibility badges, video

[5] "DELF: Safeguarding deletion correctness in Online Social Networks"   08/2020
K. Cohn-Gordon, G. Damaskinos, D. Neto, J. Cordova, B. Reitz, B. Strahs,
D. Obenshain, P. Pearce, I. Papagiannis
USENIX Security Symposium 2020, paper, video

[4] "The Imitation Game: Algorithm Selection by Exploiting Black-Box Recommenders"   06/2020
G. Damaskinos, R. Guerraoui, E. Merrer, C. Neumann
NETYS 2020 (International Conference on Networked Systems), paper, code, video

[3] "AggregaThor: Byzantine Machine Learning via Robust Gradient Aggregation"   05/2019
G. Damaskinos, E.M. El Mhamdi, R. Guerraoui, A. Guirguis, S. Rouault
MLSys 2019 (Conference on Machine Learning and Systems), paper, code, video

[2] "Asynchronous Byzantine Machine Learning (the case of SGD)"   07/2018
G. Damaskinos, E.M. El Mhamdi, R. Guerraoui, R. Patra, M. Taziki
ICML 2018 (International Conference on Machine Learning), paper, code

[1] "Capturing the Moment: Lightweight Similarity Computations"   05/2017
G. Damaskinos, R. Guerraoui, R. Patra
ICDE 2017 (IEEE International Conference on Data Engineering), paper, code

PROFESSIONAL SERVICE

Reviewer: AAAI: [2022, 2021], ICLR [2023, 2022], NeurIPS: [2022, 2021, 2020 (top 10%)],
            ICML: [2023, 2022, 2021 (expert), 2020 (top 33%), 2019], MLSys: 2019 (external)
Project mentor during PhD: **1** PhD semester, **1** MSc thesis, **5** MSc semester, **1** BSc semester, **1** intern
EPFL teaching assistant: Distributed algorithms CS-451 (2018, 2019),
            Real-time systems CS-321 (2018, 2019), Analysis 1 MATH-101 (2016, 2017)

TECHNICAL SKILLS (MAIN)

Programming: Python, SQL, Hack, Java, C, C++
Frameworks/Tools: TensorFlow, Apache Spark, Android NDK, PyTorch

LANGUAGES

Greek: Native proficiency
English: Full professional proficiency (C2 - Michigan University ECPE)
German: Limited working proficiency (B1 - Goethe Zertifikat)
French: Elementary proficiency