# FOTEINI STRATI

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#### **EDUCATION**

#### ETH Zurich, Switzerland

Nov. 2021 - now

PhD in Computer Science EASL research group

Advisor: Prof. Ana Klimovic

Research Interests: Systems for Machine Learning, Cloud Computing

Thesis Topic: Increasing resource utilization and fault-tolerance for machine learning workloads

# ETH Zurich, Switzerland

Sep. 2019 - Sep. 2021

MSc in Computer Science 90 ECTS, GPA: 5.29/6.0

Thesis: Characterising Resource Elasticity and Fault Tolerance in Distributed Machine Learning

# National Technical University of Athens, ECE School, Greece

Dec. 2013 - Feb. 2019

Diploma in Electrical and Computer Engineering

300 ECTS, GPA: 9.02/10

Major in Computer Systems and Software

Thesis: Study and design of concurrent priority queues for NUMA architectures

#### **PUBLICATIONS**

- Foteini Strati, Xianzhe Ma, Ana Klimovic, Orion: Interference-aware, Fine-grained GPU Sharing for ML Applications, to appear in EuroSys 2024
- Maximilian Böther, **Foteini Strati**, Viktor Gsteiger, Ana Klimovic, Towards A Platform and Benchmark Suite for Model Training on Dynamic Datasets, EuroMLSys 2023
- Joel Andre, Foteini Strati, Ana Klimovic, Exploring Learning Rate Scaling Rules for Distributed ML Training on Transient Resources, Distributed ML 2022
- Foteini Strati, Christina Giannoula, Dimitrios Siakavaras, Georgios Goumas, Nectarios Koziris, An Adaptive Concurrent Priority Queue for NUMA Architectures, ACM International Conference on Computing Frontiers, 2019

## INDUSTRY EXPERIENCE

# Microsoft Research, Redmond, US

June 2023 - September 2023

Research Intern

Mentor: Amar Phanishayee

• Developed techniques to improve performance in Generative Large Language Model serving.

### NVIDIA, Switzerland

June 2022 - September 2022

Software Engineering Intern

Mentors: Eric Hall and Ville Kallioniemi

- Implemented and analyzed the impact of resource elasticity in distributed ML training for autonomous driving workflows.
- Improved average job scheduling time by an order of magnitude.

#### Huawei Zurich Research Center, Switzerland

Sep. 2020 - Feb. 2021

Cloud Architectures Research Intern

Mentors: Bill McColl and Albert-Jan Yzelman

• Fault-tolerant programming models and systems for cloud and HPC applications.

# Centaur Analytics, Athens, Greece

Junior Software Engineer

Jan. 2019 - Aug. 2019

•  $CO_2$  emission forecast in silos with time series analysis and genetic algorithms.

#### AWARDS

• ETH Medal 2022 for outstanding Master's thesis

Feb 2022

• NTUA Thomaidio Award 2019 for paper publication in international conference

June 2020

#### **SKILLS**

• **Programming Languages:** C, C++, CUDA, Python, SQL, MATLAB, Assembly (ARM, AVR, 8086, MIPS)

• Frameworks and Libraries: PyTorch, Ray, RocksDB, Apache Kafka, Kubernetes

• Parallel Programming: MPI, OpenMP

• Other: Git, Unix, LATEX

#### TEACHING EXPERIENCE

ETH Zurich,	Teaching	Assistant
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Seminar on Machine Learning Systems Cloud Computing Architecture 2022, 2023 2022, 2023

Systems Programming and Computer Architecture

2022

#### ETH Zurich, Project Mentorship

Ixeia Sánchez Périz: Towards optimal resource allocation and communication schedule

for ML training in the Cloud, (MSc Thesis)

ongoing

Paul Elvinger, Tolga Kerimoglu:

Enabling efficient ML training across datacenters, (Semester project)

ongoing

Xianzhe Ma: Evaluating GPU sharing policies for ML workloads, (Semester project)

2023

Xindi Zuo: DMA for Non-Volatile Memory, (MSc thesis)

2023

Jingyi Zhu: Evaluating the performance of NCCL collectives in the cloud, (Semester project)

2022

Joel André: Accurate, elastic large-scale distributed training over transient resources, (BA Thesis)

2022

# National Technical University of Athens, Lab Assistant

Operating Systems

Feb. 2018 - June 2018

Introduction to Programming

Sep. 2016 - Feb. 2017

## **SERVICE**

• OSDI '22 and ATC '22 artifact evaluation committee

April 2022 - June 2022