

ALICIA FORTES MACHADO

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EDUCATION

ENS Paris-Saclay , <i>Gif-sur-Yvette, France</i> M.Sc. in Mathematics, Vision and Learning (MVA).	<i>Sep 2021 – Present</i>
École Polytechnique , <i>Palaiseau, France</i> M.Sc. in Data Science. B.S. in Computer Science & Applied Mathematics. Selected for Eiffel scholarship.	<i>Jan 2019 – Sep 2021</i> Overall GPA: 3.7
Instituto Tecnológico de Aeronáutica <i>São José dos Campos, Brazil</i> B.S. in Computer Engineering.	<i>Jan 2017 – Dec 2018</i> Overall GPA: 3.6

WORK EXPERIENCE

Google <i>Software Engineering Intern – Research in ML for compilers</i>	<i>Mar 2021 – Jul 2021</i> <i>Paris, France</i>
<ul style="list-style-type: none">Implemented a ML-based performance model for a new IR called Sair using Jax and TFDS. Built a complete infrastructure to process and represent Sair data; gather accurate performance measurements; and train and evaluate the model. Experimented with different parameters, and found suitable metrics and loss functions.Achieved results as competitive as other works in ML for compilers - 7.5% of MAPE in performance prediction.	
Google <i>Software Engineering Intern – Capture the Flag infrastructure (kCTF)</i>	<i>Jun 2020 – Sep 2020</i> <i>Paris, France</i>
<ul style="list-style-type: none">Implemented a K8s operator in Go using Operator SDK, which watches for all Custom Resources (CRs) associated with a specific CR Definition and updates K8s. It checks and ensures the settings set for a Challenge in kCTF.Allowed to have essential features in the infrastructure as version control and RBAC.	

RESEARCH

École Polytechnique – Graduate research Implemented and evaluated a reinforcement learning agent for inference across probability trees incurred by a classifier chains. Developed the project in Python with scikit-learn, Pytorch and OpenAI Gym libraries.	<i>Oct 2020 – Mar 2021</i>
National Institute of Pure and Applied Mathematics – Summer course Researched Real Analysis in an undergraduate level. Selected for scholarship.	<i>Jan 2018 – Feb 2018</i>

PROJECTS

Bombberman agent <ul style="list-style-type: none">Developed a Reinforcement Learning agent and Open-AI environment for playing Bombberman. github.com/aliciafmachado/bombberman-agent
FEERIC prediction <ul style="list-style-type: none">Identified main aspects that maintain women answering the FEERIC questionnaire on breast cancer. <i>Private repository due to non-disclosure agreement</i>
ArtGAN <ul style="list-style-type: none">Implemented with Pytorch a generative neural network that produces art based on the ArtGAN paper. github.com/aliciafmachado/artgan-implementation
Analysis of Traffic Accident Dataset <ul style="list-style-type: none">Analysed a dataset of traffic accident in France using Python to help guide public policy. github.com/aliciafmachado/traffic-accident-injury-analysis

SKILLS

Computer Languages	Python, C++, Java, Go, R, SQL, C.
Machine learning libraries	Jax, Pytorch, Tensorflow, and scikit-learn.
Spoken languages	Portuguese (native), English (fluent), French (fluent), German (intermediate).
Other tools	Apache Beam, Kubernetes, and Cloud (GCP & Azure).