LAETITIA TEODORESCU

Contact

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Research interests

Open-endedness
Intrinsic motivation and artificial curiosity
Goal-conditioned reinforcement learning
Language models
Program synthesis
Evolutionary computing and diversity algorithms

Non-ML scientific interests

Cognitive psychology (esp. developmental and curiosity)
Evolutionary science (esp. cultural evolution)
Origins of language
Artificial Life

Other interests

VIsual arts (traditional & generative)
Animation and computer graphics
Music

Technical skills

Python
pytorch
tensorflow
data science stack

Supervised/self-supervised:
Transformers
GNNs
LM finetuning
Reinforcement learning:
PPO
Q-Learning
LM RL finetuning

Prompting and text agents

Past experience with:
Objective-C
C#/Unity
Basic:
C/C++
OpenGL
CUDA
Haskell

Photoshop/Illustrator

EDUCATION

PhD in AI 2019-2023
Inria - University of Bordeaux
Endless minds most beautiful; building open-ended linguistic autotelic agents with deep reinforcement learning and language models

Master's degree 2018-2019
Telecom ParisTech
Masters in AI. Deep learning, RL, data science, symbolic AI, ethics

Engineering degree 2014-2017
Ecole polytechnique
Math, applied math, physics, computer science, biology

PROJECTS AND PUBLICATIONS

Codeplay: Autotelic Learning through Collaborative Self-Play in Programming Environments
Teodorescu L., Colas C., Bowers M., Carta T, Oudeyer P.-Y.
Training a code LM to generate intermediately difficult and novel programming puzzles with RL;
Work in progress, To be presented in the IMOL NeurIPS 2023 workshop

ACES: Generating Diverse Programming Puzzles with Autotelic Language Models and Semantic Descriptors
Pourcel J., Colas C., Oudeyer P.-Y. Teodorescu, L.
Augmenting diversity-producing algorithms with an LM-based semantic behavioral description space to generate diverse programming puzzles;
Under review at ICLR2024; To be presented in the ALOE NeurIPS 2023 workshop

Augmenting Autotelic Agents with Language Models Towards Open-Ended Skill Discovery
Colas, C; Teodorescu, L.; Oudeyer, P.-Y.; Yuan, E.; Côté, M.-A.
Efficient text agents autonomously discovering skills in a household environment;
CoLLAs 2023

A Song of Ice and Fire: Analyzing Textual Autotelic Agents in ScienceWorld
Teodorescu, L.; Yuan, E.; Côté, M.-A.; Oudeyer, P.-Y.
Analyze design decisions for autotelic text agents in a complex interactive text game;
Preprint, 2023

Grounding Spatio-Temporal Language with Transformers
Karch, T.; Teodorescu, L.; Hofmann, K.; Oudeyer, P.-Y.
Define synthetic language with spatio-temporal semantics and learn to ground it in an embodied agent's trajectories with different Transformer-based architectures;
NeurIPS 2021

SpatialSim: Recognizing Spatial Configuration of Objects with Graph Neural Networks
Teodorescu. L.; Hofmann, K.; Oudeyer, P.-Y.
Compare performance of various GNN and CNN based architectures on spatial configuration of object tasks;
Frontiers in AI

OTHER EXPERIENCE

Organizer,
Intrinsically-Motivated and Open-Ended Learning workshop
NeurIPS 2023

Lead Organizer,
Language and Reinforcement Learning workshop
NeurIPS 2022