

Artem Zholus

🔗 [github](#) [linkedin](#) [website](#) [scholar](#)

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Research Goal: Build adaptive & autonomous agents with the aid of Reinforcement Learning, Language Models, and Structured Communication.

Current Project: Using automated feedback from an embodied RL agent to improve Language Models' groundedness (RL from Computational Feedback). **My proposal won external funding at MILA.**

EDUCATION

- **PhD in AI: MILA, Polytechnique Montréal: polymtl.ca** Montréal, Canada
PhD in RL+NLP under Sarath Chandar, chandar-lab.github.io Jan. 2023 – Jan. 2027
- **MSc in AI: Moscow Institute of Physics and Technology : mipt.ru/en** Moscow, Russia
MSc of Artificial Intelligence and Machine Learning Oct. 2020 – Aug. 2022
 - **GPA:** 5.0/5 (top 3% out of 400 students), Degree with honors
 - **Funding:** Study grant from a private fund (top-1% of applicants)
- **BSc in CS: ITMO University : en.itmo.ru** Saint Petersburg, Russia
BSc of Applied Mathematics and Informatics Sep. 2014 – Aug. 2018
 - **GPA:** 4.21/5 (top 10% / 120 students); **Major:** Applied Maths & Computer Science; **Minor:** Software Eng.

RESEARCH EXPERIENCE

- **EPFL: École Polytechnique Fédérale de Lausanne (EPFL) : epfl.ch** Lausanne, Switzerland
Master's Enhancement Internship @ VILAB vilab.epfl.ch Sept. 2022 – Sept 2023
 - Project in Multimodal Vision Representation learning.*Summer Research Intern (top 2% out of 1800 applicants) @ LIONS lab* May 2022 – August 2022
 - Project in deep RL for zero-sum games based on the theoretical results from the LIONS lab
- **Insilico Medicine : insilico.com** Saint Petersburg, Russia
Research Engineer, core AI team @ chemistry42 SaaS drug discovery platform Sep. 2018 - Mar. 2021
 - Developed and deployed two top-performing drug-discovery RL algorithms in production.
 - Worked on the company's bespoke deep learning framework used in research and production.*Research Engineering Intern* July 2017 – Aug. 2018
 - Built molecular sequential generative models for drug discovery projects.

FIRST AUTHOR PAPERS

- Mohammad Reza Samsami*, **Artem Zholus***, Janarthanan Rajendran, Sarath Chandar. *Mastering Memory Tasks with World Models* **Under review** [[openreview link](#)]
 - Large margin SOTA performance in a diverse set of memory RL domains: bsuite, POPgym, Memory Maze.
- **Artem Zholus**, Alexey Skrynnik, Shrestha Mohanty, Zoya Volovikova, Julia Kiseleva, Artur Szlam, Marc-Alexandre Côté, Aleksandr I. Panov. *IGLU Gridworld: Simple and Fast Environment for Embodied Dialog Agents*. **Embodied AI workshop, CVPR 2022**. [[arxiv](#)]
- Julia Kiseleva*, Alexey Skrynnik*, **Artem Zholus***, Shrestha Mohanty*, Negar Arabzadeh*, Marc-Alexandre Côté*, Mohammad Aliannejadi, Milagro Teruel, Ziming Li, Mikhail Burtsev, Maartje ter Hoeve, Zoya Volovikova, Aleksandr Panov, Yuxuan Sun, Kavya Srinet, Arthur Szlam, Ahmed Awadallah. *IGLU 2022: Interactive Grounded Language Understanding in a Collaborative Environment at NeurIPS 2022*. **NeurIPS Competition, 2022** [[arxiv](#)]
- **Artem Zholus**, Yaroslav Ivchenkov and Aleksandr Panov. *Factorized World Models for Learning Causal Relationships*. **OSC Workshop, ICLR 2022**. [[link](#)] [[poster](#)]