Artem Zholus

github linkedin website scholar

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Education

- **PhD in AI: MILA, Polytechnique Montréal: polymtl.ca** — Montréal, Canada
  PhD with 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 — Sept. 2020 – Aug. 2022
  - **GPA**: 5.0/5 (top 3% out of 400 students), Degree with honors
  - **Thesis**: Task generalization in reinforcement learning for robotic control with learned world models
- **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

- **Meta AI** — Montreal, Canada
  Visiting Researcher — Oct. 2024 – Now
- **Google DeepMind** — Montreal, Canada
  Student Researcher — Apr. 2024 – Sept. 2024
- **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.

Papers (* - denotes equal contribution)

- **Artem Zholus**, Maksim Kuznetsov, Roman Schutski, Rim Shayakhmetov, Daniil Polykovskiy, Sarath Chandar, Alex Zhavoronkov. *BindGPT: A Scalable Framework for 3D Molecular Design via Language Modeling and Reinforcement Learning*, preprint 2024 [arxiv] [website];
- Mohammad Reza Samsami*, **Artem Zholus***, Janarthanan Rajendran, Sarath Chandar. *Mastering Memory Tasks with World Models* **(oral, top-1.2%) ICLR 2024** [website];
- Sonia Joseph*, **Artem Zholus***, Mohammad Reza Samsami*. *Mining the Diamond Miner: Mechanistic Interpretability on the Video PreTraining Agent*, **Attrib workshop at NeurIPS 2023**
- **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]