

# Georgy Savva

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## RESEARCH INTERESTS

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World Models, Representation Learning, Digital Agents, Multimodal Learning

## EDUCATION

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### New York University

New York, United States

*Master of Science in Computer Science, Courant Institute of Mathematical Sciences. GPA: 3.8*

2024 – Expected 2025

Relevant courses: Computer Vision

### Russian University of Cooperation

Moscow, Russia

*Bachelor of Science in Computer Science*

2019 – 2021

## RESEARCH EXPERIENCE

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### Research Assistant

Jan 2025 – Present

*NYU Courant Institute of Mathematical Sciences, Advised by Prof. [Saining Xie](#)*

*New York, United States*

- Developed the first multi-agent Minecraft World Model
- Investigated quality degradation in video world models by applying Diffusion Forcing and Self Forcing

### Research Intern

Jun 2024 – Nov 2024

*NYU Courant Institute of Mathematical Sciences, Advised by Prof. [Lerrel Pinto](#)*

*New York, United States*

- Applied online reinforcement learning to fix the human demonstration morphology gap for dexterous robotic manipulation
- Trained a behavior cloning policy using transformers on third-person human demonstration data to solve dexterous robotic hand tasks
- Set up an auto-resettable reinforcement learning environment for online robot training using the spacemouse device

## TEACHING EXPERIENCE

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### Graduate Teaching Assistant

Sep 2025 – Dec 2025

*NYU Courant Institute of Mathematical Sciences. Prof. [Saining Xie](#)*

*New York, United States*

- Led weekly office hours for CSCI-GA.2271-001 Computer Vision. [Website](#)
- Helped students with their research projects and homework

## PUBLICATIONS

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### 1. *Solaris: A Multi-agent Video World Model*

**G. Savva\***, O. Michel\*, P. Waiwitlikhit\*, D. Lu\*, T. Meehan, D. Mishra, J. Lu, S. Poddar, S. Xie.  
(Expected Release Jan 2026)

### 2. *HuDOR: Bridging the Human to Robot Dexterity Gap through Object-Oriented Rewards*

I. Guzey, Y. Dai, **G. Savva**, R. Bhirangi, L. Pinto.  
ICRA 2025. [Website](#)

## PROJECTS

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### Do Pre-Trained and Fine-Tuned World Models Generalize?

Jan 2025 – May 2025

Investigated the generalization and finetuning of two SOTA Minecraft World Models on three data distributions.  
[Website](#)

### AppSim: A Learned World Model for an App API

Jan 2025 – May 2025

Used ChatGPT o3 in a zero-shot setting, achieving 74% accuracy, and compared its performance to a finetuned TinyLlama model. [Website](#)

### Transformer-Based Diffusion for Game Generation

Oct 2024 – Dec 2024

Trained a transformer diffusion model to simulate DOOM trajectories. It achieves a PSNR of 32.21 in the teacher-forcing setting, producing an indistinguishable quality from the ground truth. [Website](#)

## Advantage Actor-Critic with Optuna

Jul 2024 – Sep 2024

Trained a reinforcement learning agent with Optuna for the HalfCheetah env, achieving a 24% better performance than the best publicly available policy. [Website](#)

## Open-Source Library Scany

May 2020 – Present

Created an open-source library to map data from a database into Go objects. The library has 1,500 stars on GitHub and is used by thousands of companies. [GitHub](#)

## INDUSTRY EXPERIENCE

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### Senior Software Engineer

Oct 2023 – May 2024

*Raylu*

*New York, United States*

- Led backend development of an LLM chatbot for healthcare and deployed it to production, serving first paying customers
- Developed an LLM-powered SaaS workflow automation application using the open source workflow engine Activepieces, allowing the company to release a new product in under 3 months

### Technical Co-Founder

Jul 2022 – Aug 2023

*Scifind*

*Los Angeles, United States*

- Launched a troubleshooting platform for bioscientists into production, gaining 4,000 MAU in the first 2 months
- Led the development of the product with a team of 2 engineers using TypeScript, Next.js, and Node.js

### Senior Software Engineer

Jan 2021 – Jul 2022

*IOTA*

*Berlin, Germany*

- Developed a new network layer of the blockchain node using libp2p, decreasing the number of peering errors by 70%
- Set up automatic deployment via Ansible and GitHub Actions, accelerating the development speed by 25%
- Introduced Go guidelines to the project and tools to ensure them, reducing the frequency of bugs by 50%

### Senior Software Engineer

Jan 2020 – Jan 2021

*Elsa*

*San Francisco, United States*

- Implemented App Store and Google Play in-app subscriptions as microservices using FastAPI, which improved the correctness of billing by 50%
- Integrated payment gateway Instamojo, increasing the number of app purchases in Asia threefold

### Software Engineer

Mar 2017 – May 2019

*Edwin*

*San Francisco, United States*

- Participated in building the English tutor chatbot from a prototype stage to being the top 1 bot on Facebook
- Implemented a YAML-file-based framework for building dialog systems, which allowed the company to launch a new product on Google Assistant
- Designed a distributed queue using PostgreSQL to handle messages from 800,000 users
- Developed the user knowledge graph service using Neo4j, improving the performance of read queries threefold

### Software Engineer

Jun 2016 – Mar 2017

*Snaappy*

*Moscow, Russia*

- Rewrote the messaging service in Go, which increased the backend performance fivefold
- Migrated the chat storage from PostgreSQL to MongoDB, allowing horizontal scalability for the data layer
- Implemented a WebSocket service for real-time updates using Go, driving user engagement by 30%

## SKILLS

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**Languages:** Python, SQL, Go, TypeScript

**Machine Learning:** Transformers, Diffusion, U-Net, CNN, LSTM, Reinforcement Learning, Distributed Training, TPU

**Libraries:** PyTorch, JAX, Gym, Optuna, Hydra, TensorFlow, Numpy, Pandas, FastAPI, React, Node.js

**Tools:** Docker, Kubernetes, PostgreSQL, AWS, GraphQL, Hasura