

# Georgy Savva

[georgy.savva@nyu.edu](mailto:georgy.savva@nyu.edu) | [georgysavva.github.io](https://georgysavva.github.io) | [github.com/georgysavva](https://github.com/georgysavva)

## RESEARCH INTERESTS

World Models, Representation Learning, Digital Agents, Multimodal Learning

## EDUCATION

<b>New York University</b> <i>Master of Science in Computer Science, Courant Institute of Mathematical Sciences.</i> GPA: 3.8	New York, United States 2024 – Expected 2025
Relevant courses: Computer Vision	
<b>Russian University of Cooperation</b> <i>Bachelor of Science in Computer Science</i>	Moscow, Russia 2019 – 2021

## RESEARCH EXPERIENCE

<b>Research Assistant</b> <i>NYU Courant Institute of Mathematical Sciences, Advised by Prof. Saining Xie</i>	Jan 2025 – Present New York, United States
• Developed a Minecraft World Model in JAX, matching the performance of the proprietary SOTA model	
• Developed the first multi-agent Minecraft World Model	
<b>Research Intern</b> <i>NYU Courant Institute of Mathematical Sciences, Advised by Prof. Lerrel Pinto</i>	Jun 2024 – Nov 2024 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	
• Setup an auto-resettable reinforcement learning environment for online robot training using the spacemouse device	

## TEACHING EXPERIENCE

<b>Graduate Teaching Assistant</b> <i>NYU Courant Institute of Mathematical Sciences. Prof. Saining Xie</i>	Sep 2025 – Dec 2025 New York, United States
• Led weekly office hours for CSCI-GA.2271-001 Computer Vision. <a href="#">Website</a>	
• Helped students with their research projects and homework	

## PUBLICATIONS

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

<b>Do Pre-Trained and Fine-Tuned World Models Generalize?</b> Investigated the generalization and finetuning of two SOTA Minecraft World Models on three data distributions. <a href="#">Website</a>	Jan 2025 – May 2025
<b>AppSim: A Learned World Model for an App API</b> Used ChatGPT o3 in a zero-shot setting, achieving 74% accuracy, and compared its performance to a finetuned TinyLlama model. <a href="#">Website</a>	Jan 2025 – May 2025
<b>Transformer-Based Diffusion for Game Generation</b> 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. <a href="#">Website</a>	Oct 2024 – Dec 2024

<b>Advantage Actor-Critic with Optuna</b>	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. <a href="#">Website</a>	
<b>Open-Source Library Scany</b>	May 2020 – Present
Created an open-source library to map data from a database into Go objects. The library has 1,300 stars on GitHub and is used by thousands of companies. <a href="#">GitHub</a>	

## INDUSTRY EXPERIENCE

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<b>Senior Software Engineer</b>	Oct 2023 – May 2024
<i>Raylu</i>	<i>New York, United States</i>
<ul style="list-style-type: none"> <li>Led backend development of an LLM chatbot for healthcare and deployed it to production, serving first paying customers</li> <li>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</li> </ul>	
<b>Technical Co-Founder</b>	Jul 2022 – Aug 2023
<i>Scifind</i>	<i>Los Angeles, United States</i>
<ul style="list-style-type: none"> <li>Launched a troubleshooting platform for bioscientists into production, gaining 4,000 MAU in the first 2 months</li> <li>Led the development of the product with a team of 2 engineers using TypeScript, Next.js, and Node.js</li> </ul>	
<b>Senior Software Engineer</b>	Jan 2021 – Jul 2022
<i>IOTA</i>	<i>Berlin, Germany</i>
<ul style="list-style-type: none"> <li>Developed a new network layer of the blockchain node using libp2p, decreasing the number of peering errors by 70%</li> <li>Set up automatic deployment via Ansible and GitHub Actions, accelerating the development speed by 25%</li> <li>Introduced Go guidelines to the project and tools to ensure them, reducing the frequency of bugs by 50%</li> </ul>	
<b>Senior Software Engineer</b>	Jan 2020 – Jan 2021
<i>Elsa</i>	<i>San Francisco, United States</i>
<ul style="list-style-type: none"> <li>Implemented App Store and Google Play in-app subscriptions as microservices using FastAPI, which improved the correctness of billing by 50%</li> <li>Integrated payment gateway Instamojo, increasing the number of app purchases in Asia threefold</li> </ul>	
<b>Software Engineer</b>	Mar 2017 – May 2019
<i>Edwin</i>	<i>San Francisco, United States</i>
<ul style="list-style-type: none"> <li>Participated in building the English tutor chatbot from a prototype stage to being the top 1 bot on Facebook</li> <li>Implemented a YAML-file-based framework for building dialog systems, which allowed the company to launch a new product on Google Assistant</li> <li>Designed a distributed queue using PostgreSQL to handle messages from 800,000 users</li> <li>Developed the user knowledge graph service using Neo4j, improving the performance of read queries threefold</li> </ul>	
<b>Software Engineer</b>	Jun 2016 – Mar 2017
<i>Snaappy</i>	<i>Moscow, Russia</i>
<ul style="list-style-type: none"> <li>Rewrote the messaging service in Go, which increased the backend performance fivefold</li> <li>Migrated the chat storage from PostgreSQL to MongoDB, allowing horizontal scalability for the data layer</li> <li>Implemented a Websocket service for real-time updates using Go, driving user engagement by 30%</li> </ul>	

## SKILLS

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<b>Languages:</b> Python, SQL, Go, TypeScript
<b>Machine Learning:</b> Transformers, Diffusion, U-Net, CNN, LSTM, Reinforcement Learning, Distributed Training, TPU
<b>Libraries:</b> PyTorch, JAX, Gym, Optuna, Hydra, TensorFlow, Numpy, Pandas, FastAPI, React, Node.js
<b>Tools:</b> Docker, Kubernetes, PostgreSQL, AWS, GraphQL, Hasura

## CERTIFICATIONS

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<b>Probability &amp; Statistics for Machine Learning &amp; Data Science</b>	Sep 2024
<i>DeepLearning.AI, GPA: 93/100</i>	
<b>YC Summer Startup School</b>	Aug 2022
<i>Y Combinator</i>	
<b>Mathematics for Machine Learning: Multivariate Calculus</b>	Dec 2021
<i>Imperial College London, GPA: 96/100</i>	
<b>Mathematics for Machine Learning: Linear Algebra</b>	Dec 2021
<i>Imperial College London, GPA: 96/100</i>	