# Georgy Savva

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## Research Interests

Multimodal Learning, Representation Learning, Image Generation, Reinforcement Learning, Intelligent Agents

## **EDUCATION**

# New York University

New York, United States

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

2024 - Expected 2026

Relevant courses: Computer Vision

Russian University of Cooperation

Moscow, Russia

Bachelor of Science in Computer Science

2019 - 2021

National Research Nuclear University MEPhI

Moscow, Russia

2 years toward Bachelor of Science in Computer Science

2014 - 2016

# Research Experience

## Research Intern

Jun 2024 - Nov 2024

NYU Courant Institute of Mathematical Sciences, Advised by Prof. Lerrel Pinto

New York, United States

- Setup an auto-resettable reinforcement learning environment for online robot training using the spacemouse device
- 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

## Publications

1. HuDOR: Bridging the Human to Robot Dexterity Gap through Object-Oriented Rewards I. Guzey, Y. Dai, **G. Savva**, R. Bhirangi, L. Pinto.

ICRA 2025 (Under Review). Website

# **PROJECTS**

#### Transformer-Based Diffusion for Game Generation

Oct 2024 - Dec 2024

Trained a transformer diffusion model to simulate DOOM trajectories. In the teacher-forcing setting, it achieves a PSNR of 32.21, producing quality indistinguishable 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 1,300 stars on GitHub and is used by thousands of companies. <u>GitHub</u>

## Industry Experience

# Senior Software Engineer

Oct 2023 - May 2024

Raylu

New York, United States

- Led the development of the backend of an LLM-powered Q&A chatbot for healthcare and deployed it to production to serve the first paying customers
- Developed an LLM-powered SaaS workflow automation application using the open source workflow engine active pieces, 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

IOTA

Jan 2021 – Jul 2022 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.ai

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

Languages: Python, SQL, Go, TypeScript

Machine Learning: Transformers, Diffusion, U-Net, CNN, LSTM, Reinforcement Learning Libraries: PyTorch, Gym, Optuna, Hydra, TensorFlow, Numpy, Pandas, FastAPI, React, Node.js

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

#### CERTIFICATIONS

Probability & Statistics for Machine Learning & Data Science  Deep Learning. AI, GPA: 93/100	Sep 2024
Improving Deep Neural Networks  Deep Learning.AI, GPA: 98/100	Jun 2023
Neural Networks and Deep Learning  Deep Learning. AI, GPA: 97/100	May 2023
$rac{ ext{YC Summer Startup School}}{ ext{Y Combinator}}$	Aug 2022
$\frac{\textbf{Intro to Machine Learning}}{\textit{Kaggle}}$	Jul 2022
Mathematics for Machine Learning: Multivariate Calculus  Imperial College London, GPA: 96/100	Dec 2021
Mathematics for Machine Learning: Linear Algebra Imperial College London, GPA: 96/100	Dec 2021