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. <u>Lerrel Pinto</u>

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

 $1. \ \textit{HuDOR: Bridging the Human to Robot Dexterity Gap through Object-Oriented Rewards}$

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. 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 1,300 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 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 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, Distributed Training

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
$\frac{\textbf{Intro to Machine Learning}}{Kaggle}$	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