

Evgenia (Jane) Ivanova

Robotics AI Engineer with prior software integration development experience (8yoe)

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EXPERIENCE

Meta, Fundamental AI Research (FAIR) - Robotics Systems Integrator

Jul 2025 - Present

- Bridged the sim2real gap by leading VLA control policy evaluations for pick-and-place skill deployed on real-robot (dual-arm) and debugging the evaluation stack (data capture, instrumentation, and result aggregation), identifying and fixing critical bugs that resolved runtime blocks, improved reproducibility and result fidelity
- Enabled A/B evaluations and consistent cross-team research collaboration with reproducible comparisons by architecting and standardizing evaluation contract (protocol + data schema + metric definitions).
- Reduced manual evaluation time by 50% by developing an automated evaluation pipeline for VLA (vision-language-action) and World Model policies that standardized parametrization, policy deployment on real robot embodiments, and metric aggregation
- Improved statistical rigor and comparability by designing a unified scoring protocol and A/B benchmarking framework with randomized stratified sampling to ensure statistically valid policy comparisons across runs and environments
- Assisted in scaling to new robotic setups by assembling hardware, installing and preparing codebase and system configuration, developing automation scripts, and troubleshooting complex software/hardware issues

ROS2, embodied AI, visual-language model, pi0, paligemma 3b, NVIDIA Jetson, Intel NUC, CUDA, hugging face, Python, Javascript, AWS S3

SkyMul (Startup) - Robotics Engineer

May 2023 - Jun 2025

- Enabled real-time visualization and control of robot localization by developing a custom Foxglove panel (2D & 3D) and control node for state tracking and task execution.
- Improved drone-based mapping and reconstruction accuracy by building layout diagram- and image-processing routines (cctag, lines, custom contours, feature detection, alignment) for object visualization and SfM georeferenced matching and client-faced data presentation.
- Achieved sub-centimeter precision in visual-guided manipulator alignment by implementing rebar intersection detection using a RANSAC-based depth point cloud algorithm and by winning battles against camera fps drops.
- Showcased end-to-end robotic manipulation capabilities — rebar tying and spraying with custom-built 2-DoF arm, — by leading demos to clients and at the conference World of Concrete 2023 (<https://www.youtube.com/watch?v=urHhzivcj-Q>).
- Enabled dynamic obstacle avoidance for our quadrupedal robot (customized Unitree Go1) using depth camera to avoid crashing on challenging worksite, designed other safety constraints for a mobile cart with cobot Fairino in construction worksite.
- Increased system robustness and control flexibility by designing and deploying behavioral tree for waypoint tasks navigation with mixed autonomous-teleoperated modes (remote control interrupts and commands).
- Improved **global localization reliability** by tuning covariance weights, implementing dynamic fusion switching, and smoothing noisy data from GPS/GNSS, OptiTrack, and IMU sensors.
- Improved locomotion speed achieving x1.2 increase while maintaining robustness and trajectory stability
- Eliminated control loop instabilities and safety shutdowns by diagnosing motor feedback, torque command issues and calibrating encoder offsets during high-speed locomotion.

ROS, ROS2, nav stack, RealSense depth camera, point cloud, ransac, NVIDIA Jetson, Intel NUC, CUDA12, cupy, numpy, sklearn, open cv2, behavioural tree, linux, ubuntu, Reality Capture, Pix4dMatic, DJI Mavic, Foxglove Studio custom panel, Gazebo, rViz, URDF, sensor fusion, detection, colmap, limap, edge detection

SettleTop (Startup) - Data Scientist Developer

Dec 2024 - Jan 2025

Fine-tuned gpt model to analyse github repos using OSINT. Python, ChatGPT, LangChain, github API

AMI - Data Scientist Developer Intern

Jan 2023 - Apr 2023

Enabled proactive maintenance and system reliability gains by designing architecture and developing a new scalable data warehousing and predictive analytics for hardware sensor cluster servers.

ARIMA, Python, Java, Kafka, MySQL, InfluxDB, Redfish API, Jupyter Notebook

Georgia Tech, Education program AI4ALL - Graduate Instructor

Jun 2022 - Jul 2022

Conducted classes on AI/ML fundamental concepts and programming on Python to diverse high-school students.

Python, classification, regression models, clusterization

Employed at multiple companies and Self-employed - Lead Software Integration Engineer/Architect

Aug 2013 - Jul 2021

- Worked worldwide onsite and remotely in multiple roles consulting on system integration for enterprise solutions for CRM and ERP.
- Served as a team lead and mentor.

Expertise includes (brief): **Mulesoft, Informatica Cloud, iPaaS, SAP, Salesforce, ETL, SOAP/REST, SOA, Web Services, Rabbit MQ, MySQL, PostgreSQL, Oracle DB, Java, Salesforce Apex, SAP ABAP, T-SQL, bash.**

EDUCATION

Georgia Institute of Technology – Master of Science of Electrical and Computer Engineering	2023
Moscow Institute of Physics and Technology – Bachelor of Science of Applied Physics and Applied Mathematics	2013

SKILLS

Classic ML:	Classification, Regression, kNN, Naive Bayes
Computer vision:	Image kernels, pattern recognition, object detection, semantic segmentationfiducial markers design and
NLP:	detection, 3d reconstruction
Robotics:	Flan-T5, Gemini, GPT models, fine-tuning, PEFT, LoRa, RLHP
Programming languages:	Navigation, perception, vision-guided alignment
	Python, C/C++, bash shell, Java (OCP certificate), JavaScript, NodeJS, React, T-SQL

RESEARCH PUBLICATION

Georgia Tech, [Laboratory for Intelligent Decision and Autonomous Robots \(LIDAR\)](#) – Graduate Assistant Jun 2022 – Sept 2023
ICRA 2024, “[Hierarchical Experience-informed Navigation for Multi-modal Quadrupedal Rebar Grid Traversal](#)” -
<https://arxiv.org/pdf/2311.08354>

- Researched, implemented and conducted experiments for experience-based contact planning algorithm for quadrupedal kinodynamically-aware locomotion over constrained rebar environment. **C++, OMPL, MoveIt, OCS2, Unitree Go1**
- Implemented informed heuristic to improve **RRT-Connect** algorithm implementation for global path planner in challenging terrains with walking and jumping gaits for **Unitree A1** robot. **C++, Quad-SDK**

ACADEMIC PROJECTS

Georgia Tech, **Data Science Club** – Custom Project Lead Sept 2023 – May 2024
Proposed custom project idea and led the team of 5 students to explore AI tools and techniques. Natural language processing (NER, LLM), collaborative filtering recommendation system, image classification and context-based image retrieval.
Python, Image classification, Object detection, Stable Diffusion, OpenAI, gpt, gemini

Georgia Tech, **Data Science Club** – Member Sept 2022 – Nov 2022
Developed script for automated aspect-based sentiment analysis (ABSA) of customer reviews for the products in online shop using OpenAI model. **Python, Jupyter Notebook**

COURSEWORK PROJECTS

Georgia Tech, **Intro to Robotics Research** Feb 2022 – Apr 2022

- Implemented ROS package for object detection and following (PID controller for distance maintenance) using OpenCV, odometry and LiDAR sensor; Python, object detection, PID;
- Developed autonomous navigation for Turtlebot3 to reach target avoiding unexpected obstacles on the way, and to use SLAM in the maze guided by wall signs recognition. Python, object detection, pattern recognition, image processing, sign classification.

Georgia Tech, **Statistical Machine Learning** Feb 2022 – Apr 2022

- Studied underspecification phenomenon and training efficiency in Neural Networks.
- Investigated an effect of L1 norm (Lasso) regularization on the percent of permutations appearance in parameter columns in the weight matrix 2-layer MLP.

Training on GPU clusters, CUDA12, cupy, numpy, pandas, sklearn, python

PERSONAL PROJECTS

[Furnichanter AI Web App](#) Dec 2024 – May 2025

- Delivered a production-ready, web-hosted AI-powered furniture search engine, built completely from scratch to deployment
- Enhanced user engagement by developing a chatbot powered by a prompt-engineered Gemini agent, using multi-shot instruction tuning and augmented with a search database
- Automated data population by building a web scraper to parse shop websites, fill the product database, and enable color-index-based similarity search

React + NodeJS + Flask as UI and Heroku + PostgreSQL + AWS S3 as backend

PERSONAL INTERESTS

Keen on running and playing soccer. During study at MIPT established women soccer intramural competition, trained department's team and lead it to victory in championship. Won awards such as “[the best player](#)” and “[the best goalkeeper](#)” in tournaments in and outside of my university.

Back in Atlanta I was part of non-profit weekly soccer scrimmages and was playing in co-ed team in Son of Pitches soccer club. I hope to find my new soccer family here in Bay Area. I really like outdoors activities, I'm going hiking with friends and new people from local social groups I find. I like building my little army of home assistant robots, I'm exploring crafts with UV resin and watercolor painting, the long-wanted to try art.