

Dmitri Manajev

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SUMMARY

Reinforcement Learning & Robotics engineer with **12+ years** of engineering experience shipping production software. Build multi-agent & continuous-control systems: MAPPO, HAPPO, MADDPG, PPO, SAC, TD3 in PyTorch, Unity ML-Agents, ROS 2/C++. Focus on reproducible training, evaluation and deployment (Docker, CI), deployable control, and hands-on real-robot lab work - spanning *autonomous agents, planning/control, sim-to-real, and experimentation tooling*.

SKILLS

- **RL:** PPO, SAC, TD3, TRPO, A2C/A3C, DDPG, MAPPO, HAPPO, MADDPG; multi-agent (PettingZoo, SMACv2)
- **Robotics:** ROS, ROS 2; C++; URDF, Xacro; tf/tf2 (ROS transforms); Nav2, MoveIt 2; MuJoCo, Gazebo, Isaac Gym; sim-to-real, continuous control
- **AI/ML/Tools:** PyTorch (primary), JAX, TensorFlow, NumPy, OpenCV, Weights & Biases, Unity ML-Agents
- **Infra:** Docker, Git, Linux, AWS, Jenkins
- **Languages & Other:** Python, C++, JavaScript, Swift, SQL, Solidity, Node.js, EVM

PROJECTS

- **MARL PPO Suite:** MAPPO/HAPPO for cooperative MARL (SMACv2); clean training/eval pipeline
Proof: W&B benchmarks, HF Model Zoo.
- **Unity Multi-Agent RL:** MAPPO/MASAC/MATD3/MADDPG with evaluation tooling; demonstrated performance on Unity Tennis/Soccer.
- **MADDPG Zoo (PyTorch):** Modern MADDPG for PettingZoo; reproducible baselines and evaluation scripts.
- **RL-Odyssey:** Continuous-control RL (DDPG/TD3/SAC/PPO/TRPO/A2C/A3C) with notebooks & scripts.

EXPERIENCE

• Manajev AI Labs (independent)

AI/RL/Robotics Specialist

Zurich, CH

Dec 2024 – Present

- Build reproducible RL training and evaluation pipelines for multi-agent & continuous control (MAPPO/HAPPO, MADDPG, PPO/SAC/TD3) on Unity ML-Agents/PettingZoo.
- Prototype ROS 2/C++ control loops for policy integration; containerized environments for on-device runs.
- Run algorithmic benchmarks and publish artifacts (W&B reports, HF model zoo).
- Hands-on lab work with a differential-drive mobile base and a 6-DoF manipulator + gripper; navigation, waypointing, and basic manipulation in sim and ROS 2.

• CryptoApps Manajev

Founder & Engineer

Zurich, CH

2018 – 2024

- Shipped full-stack blockchain apps (Solidity/Node/Vue) and performed smart-contract reviews & security testing.
- Developed MEV-aware transaction routing and automation; optimized node infrastructure for cost/latency.

• Swissmeda AG

Product & IT Manager / Architect / DevOps

Zurich, CH

2015 – 2018

- Managed remote engineering team, led migration to AWS/Linux/GitHub/Jira/Confluence; standardized CI/CD (Jenkins/Fastlane).
- Designed cloud infrastructure (AWS CFN/Ansible) and release pipelines across multi-brand apps.
- Authored product specs/PRDs; aligned regulatory constraints; drove iOS & backend releases.
- Architected and shipped the **smop** iOS app for 3D implant plan review; improved release cadence & reliability [App Store](#).

Senior iOS Engineer

2014 – 2015

- Architected the multi-brand **smop** iOS client; automated staging/deploy (Fastlane/CocoaPods); collaborated with surgical planning team.

- **SpotMe (Shockfish SA)** Lausanne, CH
2013 – 2014
Full-Stack Engineer
 - Built real-time event features (voting, photo sharing, check-in, surveys, data viz) across backend & mobile web (Node, CouchDB, d3).
- **Life Ideas** St. Petersburg, RU
2012 – 2013
Creator
 - Created **Instacam** (Windows Phone 7 Instagram client); received media coverage and broad user adoption **press**.
- **Lanit-Tercom** St. Petersburg, RU
2010 – 2012
Software Engineer
 - WPF/.NET, mobile/web; GUI + backend development.

EDUCATION

- **St. Petersburg State University(SPbSU)** St. Petersburg, Russia
2007 – 2012
Specialist / M.S. in Software Engineering & Mathematics
Thesis: Collaborative recommendation system for tourist attractions.

CERTIFICATIONS & TRAINING

- **Robotics Developer (Masterclass), The Construct** *In progress — Sep-Dec 2025*
- **Humanoid Robotics Certificate (Barcelona), The Construct** *Scheduled — Dec 10–12, 2025*
- **Deep Reinforcement Learning (Nanodegree), Udacity** 2025
- **Machine Learning with PyTorch (Nanodegree), Udacity** 2023
- **Full Stack JavaScript Developer (Nanodegree), Udacity** 2023
- **Data Analysis with Pandas & NumPy, Udacity** 2023