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)** — Zurich, CH
  AI/RL/Robotics Specialist — *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** — Zurich, CH
  Founder & Engineer — *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** — Zurich, CH
  Product & IT Manager / Architect / DevOps — *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**.

- **Swissmeda AG** — Zurich, CH

  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

  Full-Stack Engineer — *2013 – 2014*

  - 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

  Creator — *2012 – 2013*

  - Created **Instacam** (Windows Phone 7 Instagram client); received media coverage and broad user adoption **press**.

- **Lanit-Tercom** — St. Petersburg, RU

  Software Engineer — *2010 – 2012*

  - WPF/.NET, mobile/web; GUI + backend development.

EDUCATION

- **St. Petersburg State University(SPbSU)** — St. Petersburg, Russia

  Specialist / M.S. in Software Engineering & Mathematics — *2007 – 2012*

  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*