

Andrii Maksymenko

Junior Software Developer

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PROFILE

MSc Computer Science graduate (with Honours) with hands-on experience in Python, Kotlin, and SQL across applied AI, backend development, and mobile development. Built a hybrid reinforcement-learning agent for game NPCs presented at two international conferences, a Kotlin/Ktor REST API deployed on Azure, and an Android finance app. Comfortable working independently across the full build cycle – from design to implementation, testing, and cloud deployment. Native Ukrainian and Russian speaker, B2 English, seeking an English-speaking IT role in Prague.

KEY SKILLS

Languages & Tools: Python, Kotlin, SQL (PostgreSQL), Git, Linux

AI / Machine Learning: PyTorch, OpenAI Gym, Reinforcement Learning (PPO, DQN, A2C), Behavioral Cloning, CNNs

Backend / Cloud: Ktor, REST APIs, JWT Authentication, Docker, Microsoft Azure, GitHub Actions (CI/CD)

Mobile / Android: Kotlin, Android SDK, Firebase (Auth, Realtime DB, Storage), MVVM architecture

Databases: PostgreSQL – schema design, JOINS, views, stored procedures (PL/pgSQL), triggers; Excel (intermediate)

PROJECTS

HYBRIDEA – Hybrid RL/IL Game AI Agent – *Python, PyTorch, OpenAI Gym*

- Designed and implemented a hybrid model combining Behavioral Cloning and Proximal Policy Optimization (PPO) to train NPC agents in a Ms. Pac-Man environment, benchmarked against five baselines (DQN, PPO, A2C, Monte Carlo, BC).
- Built a Conv2D-based Actor-Critic network processing 12-channel stacked-frame input, with full training/evaluation/checkpointing pipeline supporting GPU acceleration.
- Presented results at two international academic conferences (Odesa, 2025; Sofia, Bulgaria, 2026).

Personal Finance Tracker – Android App – *Kotlin, Firebase, MVVM*

- Built a full-featured finance management app with account/auth handling, transaction logging, and budgeting, using Firebase Realtime Database and Firebase Auth.
- Structured the app using Fragment-based navigation and MVVM architecture for maintainability.

Expense Tracker API – *Kotlin, Ktor, PostgreSQL, Docker, Azure*

- Built a REST API with JWT authentication, BCrypt hashing, refresh tokens, rate limiting, and a SendGrid-based password reset flow, with per-user data isolation enforced at the query level.
- Containerized with Docker and deployed to Azure App Service with managed PostgreSQL, Application Insights, and a GitHub Actions CI pipeline.

Story-Driven Indie Game – *Python, Pygame, PyTmx*

- Developed a 2D indie game (farming, combat, economy, save/load via Pickle) as a Bachelor's thesis project, covering full game-loop design, map loading, and state persistence.

WORK EXPERIENCE & PRACTICAL TRAINING

Pre-Diploma Practice – TOV NVO "Diskret"

Nov 2025 – Jan 2026

- Completed applied research and implementation work for the Master's thesis project (hybrid RL/IL game AI), including literature review, model implementation, and experimental evaluation.

Production Practice – PP NVP "Kare"

Feb – Mar 2024

- Practical training at an electronics R&D company; completed an individual technical assignment analyzing and extending an indie game project (architecture, design patterns, framework selection).

Production Practice – NGO "Educational Fund KIPSOLID"

2023

- Researched assistive computer-vision technologies for visually impaired users as part of an applied research assignment.

EDUCATION

MSc, Computer Sciences – with Honours

2024 – 2026

Odesa Polytechnic National University, Ukraine – Thesis: hybrid RL/IL agents for NPC behaviour in video games

BSc, Computer Sciences

2020 – 2024

Odesa Polytechnic National University, Ukraine – recognized as equivalent to a Czech Bachelor's degree in Informatika (ČVUT Prague, 2026)

Certificate: Creating Mobile Apps with Android – Anhalt University of Applied Sciences / DAAD, 2023 – 92/100 (Excellent), 120h / 4 ECTS

LANGUAGES

Ukrainian – Native · Russian – Native · English – B2 · Czech – Beginner