

Open-source games for AI-human co-op: a definitive guide

The best candidate is Veloren, a GPL-licensed voxel RPG with native multiplayer, but no single open-source game perfectly meets all criteria. The fundamental tension in this space: turn-based games ideal for AI's 3–10 second decision latency are almost always single-player, while multiplayer games are almost always real-time. Veloren, Luantu (Minetest), and OpenMW+TES3MP form the top tier, each excelling on different axes. Beyond All Reason emerges as a surprise contender with explicit co-op PvE modes and stunning 3D graphics. This report evaluates **40+ games** across seven categories, with structured assessments for every viable candidate and a final top-5 ranking.

The landscape splits into two camps with no perfect overlap

Across every category searched — MMORPGs, roguelikes, MUDs, dungeon crawlers, voxel games, space sims, and strategy games — a consistent pattern emerged. **Turn-based games that would let Timmy think for 3–10 seconds per action (DCSS, Cataclysm:DDA, Wesnoth, Shattered Pixel Dungeon) are universally single-player.** Meanwhile, the games with robust multiplayer co-op (Veloren, Crossfire, Stendhal, Beyond All Reason) are all real-time. The multiplayer Angband variants (TomeNET, Tangaria) are the only roguelikes with true co-op — but they're real-time specifically *because* they're multiplayer, making them hostile to slow AI agents.

This means the winning strategy requires either accepting real-time gameplay with a pace slow enough for AI (Veloren exploration, Morrowind's stat-based combat) or accepting 2D graphics in exchange for turn-based co-op (Wesnoth campaigns). No game simultaneously delivers all four priorities: multiplayer co-op + AI-friendly pace + 3D graphics + active community.

Three AI gaming frameworks validate the screenshot→VLM→action architecture:


Serpent.AI (Python, works with any game via screen capture), [GitHub](#) **NVIDIA NitroGen** (foundation model trained on 40K+ hours across 1000+ titles), [GameRiv](#) and **BOT-MMORPG-AI** (PyTorch, specifically for MMORPGs). [GitHub](#) The approach is proven; the bottleneck is game selection.

Structured evaluations of all viable candidates

Tier 1: Strong candidates with multiplayer co-op

Veloren — Rust-based voxel action RPG (GPL v3)

| Criterion | Rating | Details |
|-----------------|--------------|---|
| License | GPL v3 | Fully open source including all community-created assets Veloren Wiki |
| Multiplayer | ★★★★★ | Dedicated servers, self-hosted or commercial hosting (CreeperHost, ZAP). 100+ concurrent players. Drop-in co-op |
| 3D quality | ★★★½ | Beautiful Cube World-style voxels. Vibrant, distinct entities. Day/night cycle, weather. Good VLM legibility |
| AI-friendliness | ★★☆ | Real-time combat with dodging, weapon switching, aiming. 3–10s latency is a significant problem for combat. Exploration, crafting, and trading phases are forgiving |
| Community | ★★★★★ | ~22K Discord members, Discord ~20 active devs + ~20 artists, weekly blog posts, 150+ contributors. Veloren Wiki Release parties hit 130+ players |
| Linux/headless | ✓ / ✓ | Native Linux builds Veloren Wiki (x86_64, ARM64). Separate <code>server-cli</code> binary designed for headless operation. Veloren Docker support |
| Pace | Real-time | Combat is fast; exploration is slow. No pause in multiplayer |
| Text chat | ✓ | In-game chat with global/whisper. GitHub Plugin system can intercept chat commands Veloren |
| Modding/API | WASM plugins | Rust→WASM sandboxed plugins. Veloren Can define NPCs, intercept chat, add items. API unstable but |

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| | (experimental) | functional. Trade bot implementations exist on GitHub |
| RPG depth | Moderate | Skill trees (melee/ranged/magic), crafting, multiple dungeon types (Cultist, Myrmidon, Vampire Castle), boss fights, mounts, mining. Quests still basic |
| Solo while other offline? |  | Persistent server — either player can log in independently |
| Showstoppers | Fast combat challenges AI latency. Pre-alpha stability. Bots banned on official server (self-hosting required) GitHub | |
| Overall viability | 4/5 | |

OpenMW + TES3MP — Morrowind engine reimplementaion with multiplayer (GPL v3 engine)

| Criterion | Rating | Details |
|-----------------|-----------------|--|
| License | GPL v3 (engine) | Requires legally owning Morrowind (~\$15 on GOG/Steam) for game assets. Not fully FOSS |
| Multiplayer | ★★★★ | Self-hosted co-op servers. Server browser available. TES3MP v0.8.1 (latest). Highly customizable via Lua. Development slow but active — CoreScripts updated Oct 2025, new version based on OpenMW 0.49 in development |
| 3D quality | ★★★★ | 2002-era graphics enhanced by OpenMW's modern renderer. With texture mods + shaders, surprisingly good. Distinct visual elements for VLM |
| AI-friendliness | ★★★★ | Best pace for AI. Morrowind's combat is dice-roll/stat-based — click to attack, hit probability determined by stats. No twitch reflexes needed. Movement is slow. Dialogue is menu-based (click topics). 3–10s latency is very manageable |

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| Community | ★★★ | Active Steam group, Discord. Several community servers. OpenMW itself very active. Massive Morrowind modding scene (Nexus Mods) |
| Linux/headless | ✓ / ✓ | Full native Linux. Server fully headless. Docker container available |
| Pace | Real-time but slow | Stat-based combat. Inventory/dialogue menus are untimed. Exploration pace is deliberate |
| Text chat | ✓ | F2 toggles chat. UESPWiki Messages synced across players |
| Modding/API | Excellent | Server-side Lua scripting for quest sync, game rules, housing. OpenMW's own Lua API in development. Thousands of Morrowind mods on Nexus |
| RPG depth | ★★★★★ | It's Morrowind — hundreds of quests, multiple factions, complex magic/alchemy/enchanting, massive open world, rich lore. Hundreds of hours of content |
| Solo while other offline? | ✓ | Persistent server |
| Showstoppers | Requires \$15 commercial game. TES3MP development slow. Some quest scripts don't sync. Not "truly" open source | |
| Overall viability | 4/5 | |

Luant (formerly **Minetest**) — Open-source voxel engine with massive mod ecosystem (LGPL 2.1+)

| Criterion | Rating | Details |
|-----------|-----------|--|
| License | LGPL 2.1+ | Fully open source. Mods vary per-package (most are FOSS) |

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| Multiplayer | ★★★★★ | Built-in server list, LAN or internet, drop-in join. Luanti Documentation Rock-solid networking. Dedicated <code>luantiserver</code> binary |
| 3D quality | ★★½ | Default 16px voxel textures are basic. HD packs (64/128px) available. VoxeLibre improves visuals substantially. Functional but not stunning |
| AI-friendliness | ★★★★★ | Sandbox pace with no time pressure. Blocky world highly legible for VLMs. Adjustable game speed. 3–10s latency perfectly tolerable for exploration/building/survival |
| Community | ★★★★★ | Enormous. ContentDB: 124+ Adventure/RPG packages, 305+ multiplayer mods, 377 API/library mods. Renamed to Luanti Oct 2024. Engine v5.10.0 (early 2025) |
| Linux/headless | ✓ / ✓ | Native Linux, all major distro repos. Official headless server binary Luanti with systemd/Docker support |
| Pace | Real-time (sandbox) | No time pressure in most gameplay. Combat with mob mods is moderate-paced |
| Text chat | ✓ | Built-in chat. 198 chat-related mods. Server commands via <code>/</code> |
| Modding/API | ★★★★★ | Full Lua API, extensively documented. Server-side mods auto-distributed to clients. ContentDB browser built into client. Can modify everything |
| RPG depth | ★★★ (requires assembly) | Not an RPG out-of-box. VoxeLibre provides deepest integrated experience (dungeons, enchanting, Nether). RPG modpacks available. 134 mob mods, 48 magic mods, 59 economy mods |
| Solo while other offline? | ✓ | Persistent server |
| | RPG experience requires assembling mods — no | |

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| Showstoppers | polished RPG out-of-box. Graphics less impressive than Veloren | |
| Overall viability | 4/5 | |

Beyond All Reason (BAR) — Open-source 3D RTS with co-op PvE (GPL)

| Criterion | Rating | Details |
|-----------------|-----------------------|--|
| License | GPL | Fully open source, built on Recoil engine (SpringRTS fork) Wikipedia |
| Multiplayer | ★★★★★ | Explicit co-op PvE modes: Scavenger Defense and Raptor Defense (survival wave defense). Up to 16 players. Total Annihilation Wiki Team vs AI skirmish |
| 3D quality | ★★★★½ | Best 3D graphics of any open-source game. 400+ unique units, detailed terrain, explosions, particle effects. Stunning for streaming |
| AI-friendliness | ★★★ | RTS macro strategy works at 3–10s latency — economy management, base building, army composition. Micro-management (individual unit control in combat) is harder. Co-op PvE modes are more forgiving than PvP |
| Community | ★★★★★ | 70K+ Discord members. Very active development. Regular tournaments. One of the most vibrant open-source game communities |
| Linux/headless | ✓ / ✓ | Native Linux. Dedicated server support |
| Pace | Real-time (strategic) | Economy phases are slow; battles are faster. Co-op PvE allows strategic planning |
| Text chat | ✓ | Full multiplayer chat |
| Modding/API | Lua scripting | SpringRTS/Recoil engine supports Lua game logic |
| RPG depth | ★☆ | Not an RPG — it's an RTS. But co-op PvE survival modes have progression elements (base building, tech tree) |
| Solo while | | |

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| other offline? | Partial | Games are session-based, not persistent |
| Showstoppers | Not an RPG. Session-based (no persistent world). RTS micro may challenge AI | |
| Overall viability | 3.5/5 | |

Tier 2: Solid alternatives with trade-offs

Battle for Wesnoth — Turn-based strategy with co-op campaigns (GPL v2)

| Criterion | Rating | Details |
|--------------------------|------------|---|
| License | GPL v2 | Fully open source |
| Multiplayer | ★★★★ | Co-op campaigns vs AI ("Legend of Wesmere" included). Multiplayer scenarios. Add-on campaigns The Battle for Wesnoth |
| 3D quality | ★½ | 2D hex-based with beautiful hand-drawn art. Not 3D — limits streaming visual appeal |
| AI-friendliness | ★★★★★ | Turn-based = unlimited decision time. Perfect for 3–10s latency. Discrete hex actions. Clear visual states |
| Community | ★★★★ | Available on Steam. Active add-on community. Long-established project |
| Overall viability | 3/5 | Perfect AI-friendliness, genuine co-op, but 2D graphics are a dealbreaker for the streaming priority |

Crossfire — Open-source cooperative multiplayer RPG (GPLv2)

| Criterion | Rating | Details |
|-------------|--------|--|
| License | GPLv2 | Fully open source |
| Multiplayer | ★★★★ | True co-op with party system. Shared persistent world. Multiple servers via metaserver |
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| 3D quality | ★★ | 2D tile-based (32×32). GTK2 and Java clients. Retro aesthetic |
| AI-friendliness | ★★★★ | Grid-based movement, keyboard-driven commands, relatively slow-paced. 3–10s latency manageable |
| Community | ★★★ | Small but dedicated. Very active development (commits through Feb 2026). 150+ monsters, 3000+ maps SourceForge Real-time |
| Overall viability | 3/5 | Genuinely cooperative RPG dungeon crawling. Best truly open-source co-op RPG. But 2D graphics limit streaming appeal |

Stendhal — Open-source MMORPG with web client (GPLv2+/AGPLv3+)

| Criterion | Rating | Details |
|--------------------------|---|---|
| License | GPLv2+ (server/Java client), AGPLv3+ (web client) | Fully open source |
| Multiplayer | ★★★★ | Full MMORPG. 250+ NPCs, quests, trading, raids. Persistent world SourceForge |
| 3D quality | ★★ | 2D tile-based retro RPG. Browser-playable or Java client or Android |
| AI-friendliness | ★★★★ | Web client enables Puppeteer/Playwright automation. Click-based interaction. Relaxed pace |
| Community | ★★★ | Stable long-term community. Monthly releases (latest Dec 2025, v1.49) |
| Overall viability | 3/5 | Browser-based play is excellent for AI integration. Relaxed MMORPG pace. But 2D limits streaming appeal |

Warzone 2100 — Open-source 3D RTS with co-op campaign (GPL v2+)

| Criterion | Rating | Details |
|-------------|---------|---|
| License | GPL v2+ | Fully open source |
| Multiplayer | ★★★★ | Full co-op campaign mode — play the entire story campaign cooperatively. Also skirmish vs AI |
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| 3D quality | ★★★ | 3D graphics, serviceable but dated. Tech-tree progression, vehicle design system |
| AI-friendliness | ★★★ | RTS pace. Co-op campaign is more structured than skirmish |
| Community | ★★★ | Active development. Established project |
| Overall viability | 3/5 | Co-op campaign is a rare feature. Not an RPG but has strong progression |

Ryzom — Open-source 3D MMORPG (AGPLv3/CC-BY-SA)

| Criterion | Rating | Details |
|--------------------------|--|--|
| License | AGPLv3 (code), CC-BY-SA GitHub 3.0 (art) | Fully open source |
| Multiplayer | ★★★★★ | True MMO. Official server (F2P with level 125 cap, subscription for 250). Steam Self-hosting theoretically possible via Ryzom Core |
| 3D quality | ★★ | 2004-era graphics. Functional but dated. Unique sci-fantasy aesthetic |
| AI-friendliness | ★★★ | Moderate-paced real-time. Skill-based system with custom action construction Wikipedia |
| Community | ★★ | ~150 daily players. Small but dedicated. MMO Stats Live RP events |
| Overall viability | 2/5 | Truly open-source 3D MMORPG but tiny population, dated graphics, complex self-hosting, subscription needed for full features |

Tier 3: Eliminated candidates (with reasons)

| Game | Category | Showstopper |
|-------------------|----------|---|
| PlaneShift | MMORPG | UE5 version is closed source . Proprietary content license Wikipedia forbids self-hosting/modification |

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| | | Massively Overpowered |
| The Mana World | MMORPG | 2D only , GBAtemp tiny player base |
| Caves of Qud | Roguelike | Proprietary (\$19.99 commercial). Not open source Free Linux PC Games |
| ADOM | Roguelike | Proprietary/closed source Wikipedia |
| Vintage Story | Voxel | Not open source, not free (~\$20). Flathub Source-available license only Wikipedia |
| ClassiCube | Voxel | No survival, no RPG, no combat. Creative mode only GitHub |
| Terasology | Voxel | Near-dormant development. Terasology Pre-alpha for 10+ years. Lutris Risky |
| Pioneer/Endless Sky/Oolite/Naev | Space | All single-player only — no multiplayer in any open-source space sim Itch Pioneerspacesim |
| Flare | Action RPG | Single-player only by design LinuxLinks GitHub |
| FreeDink | Action RPG | Single-player, dormant (6+ years no commits) |
| Shattered Pixel Dungeon | Roguelike | No multiplayer , developer explicitly blocks external contributions GitHub |
| OpenDungeons | Dungeon | Dead project (archived repo). Also wrong genre (Dungeon Keeper clone, not crawler) GitHub |
| Summoning Wars | Action RPG | Co-op for 2–8 players (right concept!) but dormant since ~2014 , won't compile with modern libraries |
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| Xonotic/Sauerbraten/OpenArena | FPS | No co-op PvE. PvP only. Way too fast for 3–10s AI latency |
| Daimonin | MUD/MMORPG | Essentially dormant. Last substantive activity years ago |
| DCSS | Roguelike | No multiplayer (spectator only). However, WebSocket API is excellent for AI — consider as advisor/spectator mode |
| CDDA | Roguelike | No multiplayer. GitHub Overwhelming UI complexity for VLM parsing |

The five games that actually work for Alexander and Timmy

Rank 1: Veloren — The best all-around choice

Veloren wins because it uniquely combines **fully open-source status** (GPL v3, all assets community-created), [Veloren Wiki](#) **native RPG gameplay** [GitHub](#) [Open Source Software Directory](#) (dungeons, bosses, crafting, skill trees), [Veloren](#) **beautiful 3D voxel graphics** suitable for streaming, **easy self-hosted multiplayer**, and a **thriving community** with 22K Discord members and weekly development updates. The WASM plugin system allows custom server logic, [Veloren](#) and a `server-cli` binary is explicitly designed for headless operation. [Veloren](#)

The main risk is **combat pace** — Veloren’s action combat requires dodging and aiming that may challenge Timmy’s 3–10 second latency. Mitigation strategies include: focusing on exploration/crafting/trading rather than combat; writing server plugins to slow combat speed; having Alexander handle combat while Timmy supports with ranged attacks or healing; or building a custom slower-paced game mode via the plugin API. A trade bot implementation already exists on GitHub, proving programmatic interaction is feasible.

[GitHub](#)

Rank 2: OpenMW + TES3MP — Best AI-friendly pace and RPG depth

If the \$15 cost of Morrowind is acceptable, this is arguably the strongest choice for Timmy specifically. **Morrowind’s stat-based combat** (dice rolls, not twitch reflexes) means 3–10 second latency works naturally. The RPG depth is unmatched — hundreds of quests, multiple factions, complex alchemy and enchanting, a massive open world with rich lore. Server-side **Lua scripting** enables deep customization of quest synchronization and game

rules. [UESPWiki](#)

The trade-off: you need commercial game assets, TES3MP development is slow (though not dead — CoreScripts updated October 2025), and some complex quest scripts don't sync properly between players. [UESPWiki](#) The community fork by Malseph provides an alternative development path, [Steam Community](#) and OpenMW's own Lua API is being designed with multiplayer compatibility in mind. [OpenMW](#)

Rank 3: Luanti (Minetest) — Most customizable platform

Luanti isn't an RPG out-of-the-box — it's a **platform** where you build one. [Wikipedia](#) Its strength is the massive ecosystem: **124+ Adventure/RPG packages, 305+ multiplayer mods, 134 mob mods, 48 magic mods, 59 economy mods** on ContentDB. VoxeLibre (Minecraft clone) provides the deepest integrated survival experience with dungeons and enchanting. The **Lua API** is the most mature and well-documented modding system of any candidate, [Debian](#) and the sandbox pace is ideal for AI — no time pressure in most gameplay. [Wikipedia](#)

The weakness is that assembling a satisfying RPG experience requires curating and combining mods, and the default **16px voxel graphics** are the least visually impressive of the top tier. For streaming appeal, HD texture packs help but Luanti will never match Veloren's artistic polish. However, if you want maximum control over game mechanics and AI integration, Luanti's Lua API is unbeatable.

Rank 4: Beyond All Reason — Best 3D graphics and co-op PvE

BAR is the dark horse candidate. It's not an RPG but offers something none of the RPGs do: **explicit co-op PvE survival modes** (Scavenger Defense, Raptor Defense) where human and AI team up against waves of enemies. [Total Annihilation Wiki](#) The 3D graphics are **the best of any open-source game** [Slant](#) — 400+ unique units, detailed terrain, spectacular explosions. The **70K+ Discord community** dwarfs every other candidate. [Beyond All Reason](#)

The AI can handle macro RTS strategy (economy management, base building, army composition) at 3–10 second latency, though micro-management of individual units in combat is harder. The session-based structure (no persistent world) limits the RPG progression feeling, but tech-tree advancement within each game provides meaningful decisions. **If streaming visual quality and co-op gameplay matter most, BAR is the answer.**

Rank 5: Battle for Wesnoth — Perfect AI-friendliness, imperfect visuals

Wesnoth is the only game where Timmy's 3–10 second latency is a **complete non-issue**. Turn-based hex combat means unlimited decision time, discrete actions, and perfectly clear game states. The co-op campaigns (including the built-in "Legend of Wesmere") let

Alexander and Timmy command allied armies against AI opponents. [The Battle for Wesnoth](#)

The add-on system provides hundreds of additional campaigns and scenarios.

The dealbreaker for some is **2D hex graphics** — beautiful hand-drawn art, but not the 3D streaming spectacle the brief prioritizes. If you can accept 2D, Wesnoth is technically the most AI-compatible game on this list. It's also fully GPL, extremely stable, and available on Steam with an active community. [Co-Optimus](#)

Practical recommendations for getting started

The optimal strategy depends on which priority matters most. For **maximum streaming appeal + co-op**, start with Veloren: self-host a server, have Alexander handle intense combat encounters while Timmy contributes during exploration and crafting phases, and use the plugin system to customize difficulty. For **best AI performance**, start with OpenMW+TES3MP: Morrowind's slow pace means Timmy can genuinely participate in all gameplay including combat. For **maximum long-term flexibility**, invest in Luanti with a curated RPG modpack: the Lua API enables building custom game mechanics that accommodate AI latency (like a "wait for all players" turn system).

One compelling hybrid approach: **use Veloren as the primary game for streaming** (beautiful, active, great co-op) while **developing Timmy's AI capabilities on Wesnoth or DCSS** (turn-based, structured game states, excellent tooling). DCSS's WebTiles [Wikipedia](#) WebSocket protocol sends structured JSON game state data [GitHub](#) — not just pixels — which could dramatically accelerate AI development even without multiplayer.

Conclusion

The open-source gaming ecosystem has no single game that perfectly satisfies all four priorities simultaneously. But **Veloren comes closest** — it's the only fully FOSS game with native 3D RPG co-op, active development, and a plugin system for customization. The key architectural insight is that Timmy's 3–10 second latency doesn't need to be a showstopper if gameplay roles are designed around it: let the human handle twitch combat while the AI handles strategic decisions, navigation, crafting, and communication. The games exist; the innovation needed is in **role design** — making the AI's slower pace a feature of collaborative play rather than a bug.