Matthew

Software Developer | Computer Science Student

Cracow, Poland | mattfor@relaxy.xyz | mattfor.com | github.com/MattFor | codeberg.org/MattFor

SUMMARY

Third-year Computer Science student with 10+ years of programming, mainly in JavaScript, Python and C++, who ships software people use: a Discord bot reaching 200,000+ members and packages with 127,000+ downloads.

EXPERIENCE

Creator and Sole Developer, Relaxy! 2019 – Present

Independent project | JavaScript, Node.js, discord.js v14, MongoDB | relaxy.xyz

- Built and run a Discord bot with 160+ public commands in 290+ servers reaching **200,000+ members** (about 175,000 in the official Escape the Backrooms server); it has earned $7,000+.
- Extended discord-hybrid-sharding's cluster manager (one process per group of shards) with custom IPC types, fleet-wide broadcastEval calls and hot reload of commands, events and modules.
- Cut repeat scam-image checks from ~2.3 s (Tesseract OCR in up to 4 child processes) to ~10 ms with SHA-256 hashes shared across clusters, plus a perceptual hash for near-duplicates; 3,100+ confirmed scams.
- Wrote the database layer for 135,000+ user profiles: defaults never stored, hot and cold data split, a 200 ms debounced write queue that sends only diffs, and MongoDB I/O on a worker thread.
- Built the web dashboard on Fastify and Bun with Discord OAuth2, 4 access tiers, per-session CSRF and a single write choke point with a typed allow-list.
- Keep it at 99.88% uptime (90 days to Nov 2026; a prober checks 24 services every 10 s) on a Raspberry Pi 4.
- Replaced a network watchdog that killed every cluster on errors with one that probes REST, gateway, database and DNS and repairs one cluster at a time, sparing Discord's ~1,000-a-day identify budget.

OPEN SOURCE PROJECTS

emoji-mixer | *TypeScript, Python, Rust, Go, PHP, Ruby, C#* github.com/MattFor/emoji-mixer

- **127,000+ downloads** since 2023 (126,000+ on npm) across 7 registries; the npm package is used by 1,200+ GitHub repositories; packed 99 MB of Emoji Kitchen data into 2.9 MB.
- Maps two emojis to their Emoji Kitchen image with codepoint and date lookup tables for 330,640 combinations.
- One tag-triggered workflow tests each package in its own language and publishes to 6 of the 7 registries through OIDC trusted publishing, with no stored tokens; Packagist and the Go proxy read the same tag.

Lexiglance | *C++26, Qt 6, ONNX Runtime* github.com/MattFor/lexiglance

- **12 CI-built releases** (AppImage, deb, rpm, Windows installer), listed on AppImageHub; pop-up dictionary for Linux (X11) and Windows, reading text via AT-SPI and UI Automation, falling back to PaddleOCR or Tesseract.
- Compiles Yomitan dictionaries into memory-mapped indexes, deinflects 5 languages from JSON rules and translates offline with OPUS-MT; injects no input, so it is safe alongside anti-cheat.
- AI-assisted, reviewed by hand; CI runs 110+ tests on GCC 14 and Clang 20, plus ASan+UBSan, clang-tidy and CodeQL; 8 libFuzzer targets (not in CI).

LogEye | *Python* github.com/MattFor/logeye

- **1,200+ PyPI downloads** (excluding mirrors) since Apr 2026, across 20 releases; dependency-free runtime logger on sys.settrace and the AST, with an edu mode that explains traces in plain sentences for students.
- 407 tests on a 21-job CI matrix (3 OSes, Python 3.8 to 3.14); merged an outside contributor's typing pull request.

Simple Project Tracker | *Python* github.com/MattFor/simple-project-tracker

- **1,100+ PyPI downloads** (excluding mirrors) since Aug 2026, across 9 releases; CLI with Git repository discovery, frecency lookup (optionally fed by zoxide), undo, a terminal browser and a background daemon.
- 19 commands, shell completion for bash, zsh and fish, and CI with ruff and basedpyright; selected for XERJ's Corpus Hub of reference code for coding agents.

Smaller tools | *C++23, Python, C* github.com/MattFor

- hprint, a header-only C++23 terminal-header library tested on GCC, Clang, AppleClang and MSVC; a Windows PATH editor that works past 2,047 characters; a libstrangle frame-limiter fix for current glibc.

ADDITIONAL EXPERIENCE

Community Manager, Fancy Games Oct 2022 – Present

Escape the Backrooms, a co-op horror game on Steam

- Rewrote the community's speedrun role bot in Python (aiohttp, MongoDB) on Discord's gateway and REST API, sandboxed with bubblewrap; own the Escape the Backrooms Community GitHub organisation.
- Run the official Escape the Backrooms Discord server as main administrator through its growth from 20,000 to 175,000 members; was sole administrator of the game's Steam forums for 3 years, until Oct 2026.
- Led the moderation, translation and playtesting teams as the game's first community manager; playtesters on a dedicated Steam branch found 2 crashes and numerous softlocks before the 1.0 release (Oct 2025).

OTHER PROJECTS

Personal website | *TypeScript, Bun, WebGL2, WebSockets* mattfor.com

- Realtime presence, chat and cursors over WebSockets, an adaptive quality controller targeting 60 fps and a Markdown CMS with version history and passkey sign-in; AI-assisted with Claude Code.
- Self-hosted on a Raspberry Pi with 20+ services (Relaxy!, Matrix, Minecraft) behind Caddy and a WAF.

AI development setup | *Bash, Rust, Ollama, Claude Code*

- Run Ollama, ChromaDB and SearXNG as services across a laptop, GPU desktop and Raspberry Pi linked by Tailscale, managed by a ~500-line Bash CLI and a Rust menu; main model chosen by A/B test.
- Use Claude Code with custom skills, hooks (desktop popup and ntfy push), per-project memory and multi-agent workflows, under a written repository standard with AI-agent rules and CI-only releases.

Local AI Studio | *Rust, ratatui, Ollama* In progress

- Super+R assistant for local LLMs that routes each request to a fast or a larger model and gives it 30+ tools under 4 permission modes, including a read-only bubblewrap sandbox.

EDUCATION

Computer Science, Cracow University of Technology Expected 2028

- Operating systems: POSIX IPC emergency-department simulation with 6 process roles, ~4,700 lines of C++20.
- Algorithms: neural network from scratch in C++23 (~3,900 lines) with hand-written backpropagation, 4 activation functions and a numerical gradient check in CTest, trained on UCI Car Evaluation and MNIST.
- Numerical methods (12 labs, finite-difference PDE solvers); C# and .NET course, including merged pull requests adding Docker support and unit tests to a team project.

SKILLS

Advanced: C++ (C++20/23/26), Python, JavaScript, TypeScript, Node.js, Bun, MongoDB, Linux and POSIX APIs
Experienced: Rust, C, Bash, OpenGL, CMake, GitHub Actions, Podman, Docker Compose
Familiar: C#, .NET, Go, PHP, Ruby, Qt 6, ONNX Runtime, WebGL2
Tools: Git, Claude Code, Ollama, Tailscale, Caddy, nftables, Tesseract, PaddleOCR, ChromaDB, SearXNG

LEADERSHIP AND ACTIVITIES

- Founded a student machine-learning research group; took part in HackYeah, Warsaw IT Days (WDI) and CTFs.

LANGUAGES

Polish (native), English (C2: Cambridge C1 Advanced, 204/210), Japanese (learning)