Michael Tot

Senior Systems Engineer · security architecture, game and application security, legacy rescue

Novi Sad, Serbia · German citizen (EU) · remote, open to employer-paid relocation · michaeltot.com · linkedin.com/in/michael-tot · michael@michaeltot.com

Profile

I harden and design systems that have to survive real players: the architecture, the trust boundaries and the code behind them. Coding since six, paid work since thirteen, mostly in C# and Lua. For over two years I've been the sole developer of one of the largest live Garry's Mod roleplay communities, with a real in-game economy. I'm strongest at finding and closing exploits in running systems and rescuing legacy code without losing data. I direct AI-assisted implementation and keep the design and code review myself.

Experience

Sole Developer · Diverge Networks · remote · 2024 – present

- About 700 commits across two codebases and 170+ issues taken from spec to production, with owner code review and staged testing.
- Security: closed item duplication from a race condition in shipment handling, item teleportation between vehicle trunks, oversized net messages from inventory sync, forged fingerprint data and client-trusting net messages, all without downtime.
- Secure design: every player action is validated server-side, with the client-to-server boundary treated as the main attack surface. Worked directly against adversarial clients who actively hunted for exploits.
- Justice system: warrants, records, jail, bail and appeals, server-checked end to end.
- Forensics: turned an unfinished plugin into a full evidence and case-file system.
- Legacy rescue: rewrote phones and radios from scratch, moved all plugin data from files to MySQL, and migrated every player's vehicle storage without losing an item.

"The only programmer that's worked with us in this field that has been consistently reliable, both in the work produced as well as communication." (Owner, Diverge Networks)

Owner and Developer · large multiplayer game community · remote · 2018 – 2021

- Joined as developer, bought the community two years later and ran it for eight months as owner, sole developer and head of staff, then sold it; hired a community manager and handled payments, disputes and targeted attacks on 7,000 to 14,000 members.

Career break · 2021 – 2024 · co-built Dojo Arena during this period.

Freelance Lua Developer · gmodstore and predecessors · 2013 – 2018

- Commissioned addons and gamemode work for server owners; taught programming one-to-one. Client review: "Did everything he said he would; provided constant updates on where he was with the project" (2017).

Selected projects

- Luminol (C#): a deobfuscator for auditing obfuscated Lua addons, built on AST rewriters.
- Upstream fix: found and fixed a promise-adoption bug in deferred-lua, used by a major roleplay framework; pull requests to deferred-lua and NutScript, plus a public test suite.
- Dojo Arena (C#): co-built a V Rising PvP arena mod, then rewrote it alone and released it publicly; the command framework is mine.

Case studies with code and interactive demos: michaeltot.com

Skills

- Languages: C# (through C# 15 / .NET 11), Lua and GLua, Python; reads C and assembly (Ghidra)
- Security: exploit hunting, secure design review, server-side validation and trust boundaries, race conditions, deobfuscation and reverse engineering
- Backend and practice: MySQL, networking and replication, async and promises, data migrations; system and security architecture, specs, legacy refactoring, Git, AI-assisted implementation

Languages and education

- Serbian (native), German (bilingual), English (bilingual), French (learning)
- Gimnazija "Jovan Jovanović Zmaj", Novi Sad, natural sciences and mathematics, one of the most selective schools in Serbia; perfect grades in the final year (2018)

Available full-time or contract, remote. References available on request.