

JACK DRACH

Slot Game Designer • Math and Mechanics • AI Assisted Development

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PROFILE

I design and ship complete browser based slot games on my own. I own the math model, the RTP and volatility tuning, the bonus mechanics, the animation, and the front end code. I build them by working with AI tools: Claude Code writes the implementation while I direct it, Claude Design produces the animation, and I check every game's math myself in Python with Monte Carlo simulation before it ships. Seven games are live and playable at jackdrach.com. A few are below.

HOW I BUILD

- I use Claude Code as my main build tool, breaking features into small tasks I can prompt for, checking what comes back, and folding it into a working system in TypeScript, JavaScript, and Python.
- I treat prompts like specs. They have to be precise and testable, and I rewrite them against the output until the code is right. That is how the game engines and math tooling actually get built.
- I direct full animation sets in Claude Design and export them as sprite sheets that drop straight into the game engine.
- I write my own Python simulations that run the real game logic across millions of spins, so I can prove a game behaves the way the model says before anyone plays it.

SELECTED GAMES (7 LIVE AT JACKDRACH.COM)

Wrath of Hapi 6×5 scatter pays cascade · persistent multiplier bonus · ~96% RTP

- An Egyptian cascade slot built around a “Multiplier Strike” ladder that doubles up to 1024× and keeps climbing across the whole free spins round instead of resetting.
- **Built the entire animation set in Claude Design** and wired it into the engine: the staff slam, a blue fire aura on the character, a torch with the live multiplier burning inside the flame at five different intensity levels, and a glowing field behind the board. They all ramp up together as the multiplier climbs.
- Got the Python model and the live game engine to produce identical results, then locked RTP using runs of up to 40 million spins. Also fixed a real problem where high symbols only showed up in about 30% of bonus rounds, bringing that to roughly 95% without moving RTP.

Atomic Archie 6×6 cluster pays · Meltdown Mode bonus · 94% RTP

- An atompunk cluster pays slot with a Pownudge chain mechanic and a bonus where dropped warheads stack radiation multipliers across the board.
- Tuned it to 94% with Monte Carlo runs on the real game logic, and priced the 110× buy in so it returns 95%.

Gingerbread's Grand Gables 6×6 all ways · two bonus rounds

- An all ways slot with two separate bonus rounds, each tuned to its own target RTP.

SKILLS

AI Tools: Claude Code, Claude Design, prompt writing and iteration, AI directed art, music, and sound

Design and Math: Slot math modeling, RTP and volatility tuning, payable and reel weight calibration, cascade, cluster, and all ways formats, bonus and buy feature design and pricing

Simulation: Python, Monte Carlo simulation, statistical validation, R, SQL

Development: TypeScript, JavaScript, Python, PixiJS, GSAP, Vite, Git, CI/CD, Netlify

EDUCATION

The Pennsylvania State University, B.S. Cyber Security Analytics and Operations, Aug 2025