

# Conrad Emde

## Technical Skills Overview

### EXTENDED TECHNICAL SKILLS

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- **Core Stack & Languages:**  
PHP (7/8), JavaScript, TypeScript, Node.js, Python, SQL
- **Backend & APIs:**  
GraphQL (server & client, webonyx/graphql-php, graphql-request), RESTful APIs, custom PHP MVC frameworks, background jobs and scheduled tasks
- **Frontend & UI:**  
Svelte and SvelteKit, React, Next.js, Vite, Bootstrap 5, Tailwind CSS, Chart.js, Sass
- **AI & Generative AI:**  
Prompt engineering and context optimization, Retrieval-Augmented Generation (RAG), LLM APIs (OpenAI, Anthropic/Claude, Google Gemini), agentic workflows and multi-step AI automation, local LLM deployment and operation (Ollama, llama.cpp), image generation (Stable Diffusion, Flux, Z-Image, Qwen), ComfyUI workflows, audio processing (Whisper STT, Piper TTS), GitHub Copilot integration, AI-assisted code generation and review
- **Data, Search & Analytics:**  
MySQL / MariaDB (including Percona / XtraDB Cluster), ClickHouse, SQLite, data warehousing, OLAP, reporting, Apache Solr (search and typeahead)
- **DevOps, Cloud & Infrastructure:**  
Docker, docker-compose, Kubernetes (basic), Hetzner Cloud (hcloud, cloud-init), Nginx, Apache, PHP-FPM, Git, GitLab, Jenkins, Ansible
- **Deployment & Resilience Patterns:**  
Blue-green deployments, timestamped releases, zero-downtime rollouts, Nginx ingress setups, health checks and rollback strategies
- **Testing & Quality:**  
PHPUnit, Jest, Playwright, static analysis (PHP CodeSniffer), automated tests, CI/CD pipelines, code reviews
- **Monitoring & Observability:**  
Nagios Core, NRPE, custom Nagios plugins (web, HAProxy, DNS/SSL, RAID checks)
- **Security & Authentication:**  
HTTPS/TLS, CSRF protection, API keys, HMAC-based webhook signatures, role-based access control, session management
- **Automation, Crawling & E2E:**  
Chrome DevTools Protocol / headless Chrome, Chrome Remote Interface, Appium, WebDriverIO, Android Emulator, crawler- and cron-based job orchestration
- **Media, Assets & Delivery:**  
Image pipelines with ImageMagick, jpegoptim, pngquant, CDN integration, content-addressed storage, Nginx X-Accel-Redirect
- **Messaging, CRM & External APIs:**  
HubSpot API, WhatsApp Business Cloud API, Mailgun / Mailjet, Instagram / Facebook APIs, Google Maps APIs, Mapbox, Google AdWords API
- **Tools & Environments:**  
PhpStorm, VS Code, Eclipse, Composer, npm, Yarn, Bash, Linux, macOS