

Will Griffin

programmer

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Leads the design and delivery of cloud systems and SaaS platforms. Uses Kubernetes, FluxCD, and infrastructure as code. Builds AI systems that use LLMs in business workflows.

EXPERIENCE

happyvertical.com

Founder & Lead Engineer 2024-12 - Present

Open-source platform for vertical AI agents and local knowledge bases.

s-m-r-t.dev <https://s-m-r-t.dev>

A TypeScript framework for software that people and AI agents operate on equal terms. One typed domain model generates the schema, REST, CLI, MCP, and browser agent tools, with authority enforced down to the database row. 64 packages released daily in lockstep, plus a docs site that doubles as the framework's live test bed.



One Declaration, Four Surfaces: Decorated classes compile at build time into a manifest that is at once the SQL schema, the generated REST, CLI, and MCP servers, the browser-side WebMCP tool set, and the permission catalog. 291 registered objects across 18 manifest-shipping packages.

Authority Agents Cannot Exceed: Every call resolves as a real principal in one tenant under generated Postgres row-level security. Server-side agents run as a persona's bound user with power limited to user RBAC, agent-class ceiling, and persona allow-list. Browser agents run as the signed-in user.

Agents Propose, Humans Confirm: A control-interaction registry lets an agent stage a form value beside the live one, but applying it requires a trusted human gesture. Agent self-improvement is gated the same way: reflection can propose instruction changes, activation stays with a person.

Agent Development Control Plane 2026-05

Private control plane that lets AI coding agents and humans ship to a 69-repository fleet under one enforced lifecycle. Agents lease issues, get independent multi-model review, and produce signed release evidence before a merge queue will accept their work. 16 portable skills, 22 schemas, and a 1,900-assertion test harness in dependency-free Python.

Issue Lease Lifecycle: Designed a claim, heartbeat, and release protocol where agents hold a renewable four-hour lease on an issue, races resolve by GitHub server order, and release evidence is an immutable owner-attributed commit status bound to the exact PR head. Identifiers are selectors, not credentials.

Merge Authority: Wrote a lifecycle check that revalidates every closing issue's released cycle on each PR head and in the merge queue, so a later push or reopened issue always requires a new cycle.

Signed Policy Distribution: Built policy as a signed OCI artifact pinned by digest, with a byte-bound authority substrate, monotonic generations, and channel-aware promotion through canary and smoke rings with rollback. Consumer repositories cannot select their own policy.

Hybrid GitOps Platform 2025-05

Declarative hybrid Kubernetes platform spanning Hetzner Cloud and homelab GPU nodes. One k3s cluster with embedded etcd quorum across cloud and on-prem, provisioned by CDKTF and NixOS and operated through Flux, at about 82 percent lower cost than the managed cluster it replaced.

Layered Bootstrap: CDKTF in TypeScript provisions Hetzner compute, load balancing, and firewalls plus AWS Route53, SES, and S3. NixOS flakes define each host including k3s, GPU drivers, and mesh networking. Flux reconciles system, application, and tenant layers in dependency order.

GitOps at Scale: 276 Flux Kustomizations, 51 Helm releases, and 109 namespaces across 66 applications. Image automation opens promotion pull requests instead of committing to main.

Dual Overlay Networking: Tailscale mesh with native k3s VPN auth and a Nebula mesh carrying flannel. Fixed an upstream Nebula version gap and made k3s rebuild its VXLAN device on mesh restart.

digitalfuel.io

Technical Lead 2021-03 - 2024-12

Built and ran Polycephal, a multi-tenant headless CMS and static publishing platform serving about 97 niche content and review sites across 16 organizations.

Platform Architecture

PostgreSQL with PostGraphile, row-level security across 13 tables and 31 policies, 109 SQL functions, and 98 migrations. React and Next.js admin with react-admin and a multi-root rich text editor. Graphile Worker job queue with 58 task types.

AI Content Pipeline

Multi-stage LLM pipeline that qualifies feed items against editorial criteria, derives rewritten articles, generates SEO metadata, and resolves categories against each tenant's taxonomy. Cheap models for classification and premium models for article bodies, prompt-hashed idempotency so the same job never bills twice, per-tenant API key isolation, and unmapped items routed to human review.

Syndication Engine

About 200 RSS sources polled every five minutes feeding 179 subscriptions that watch, qualify, rewrite, translate via DeepL, and publish as drafts on a delay. Roughly 200,000 articles and versions in production.

xmatters.com

Integrations Engineer 2020-03 - 2020-12

Built tools for code coverage, OAuth integration, and database patching.

Code Coverage

Built a code-coverage tool that finds untested paths.

OAuth Integration

Implemented OAuth to link Slack accounts with xMatters users.

Automation

Built Spring Framework scripts to apply database patches.

omnium.io

Technical Lead 2015-10 - 2020-03

Led architecture and delivery of a multi-tenant SaaS ERP and warehouse platform for apparel brands, distributors, and 3PLs, replacing a legacy system through incremental migration.

Platform Architecture

Designed a multi-tenant Node.js and Sails.js API with 93 models and 238 documented endpoints covering catalog with size and color matrices, orders, purchasing, receiving, bin-level inventory, allocation, pick and pack, shipping, invoicing, returns, and multi-currency pricing.

Warehouse and Inventory Engine

Wrote transactional allocation and inventory-position logic with hand-tuned SQL that reconciles sold, received, picked, and on-hand quantities per SKU across open and completed pipelines.

Documents and Data Exchange

Built PDF generation for invoices, credits, RMAs, and pick tickets, styled multi-sheet XLSX order forms, and bulk SKU and customer importers with real-time progress over sockets.

OTHER EXPERIENCE

Software Developer

Vizworx · 2020-2021

Kubernetes/AWS CDK infrastructure, e-sports bracket algorithms, Terraform templates.

Founder

coink.it · 2013-2015

Cryptocurrency platform with blockchain API and secure wallet server.

Software Engineer

iWinback · 2011-2012

Web-based call center application replacing legacy Delphi system.

Lead Developer

Gogiro Internet · 2009-2011

Multi-tenant affiliate SaaS platform on AWS.

Technical Director & Partner

Internet Media Corp · 2003–2008

Built server and media systems for content syndication and video streaming.

Software Engineer

Matrix Content · 2002–2003

Relocated to Los Angeles; built web store and backend for image/video licensing business.

Lead Programmer & Technical Consultant

Green Room Media · 2000–2002

Built web products for digital media and gaming clients.

Software Engineer

Dish Clothing · 1999–2000

Built manufacturing and barcode systems for inventory and invoicing.

Software Engineer

Cannabis Culture Magazine · 1997–1999

EDUCATION & CERTIFICATIONS

Agile Product Ownership

UBC Sauder School of Business

Issued Feb 2018 · Credential ID: II863

CELTA (Certificate in Teaching English to Speakers of Other Languages)

Issued Jul 2016



Full project detail and interactive resume at willgriffin.dev