Matt Pettenato

Software Engineer | Backend Systems & AI Products
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SUMMARY

Software engineer building backend services, distributed execution systems, and AI agents in Python and TypeScript. Owns projects from design through implementation and rollout, with experience turning customer requirements into reusable platform capabilities.

EXPERIENCE

Checksum.ai November 2024 - Present

Software Engineer

Early hire (2nd US engineer); previously Senior Solutions Engineer and Forward Deployed Engineer

- Built distributed test execution on Kubernetes, including job dispatch, artifact collection and report merging; ran 4,900+ sharded runs and 100,000+ shard jobs in production.
- Built features for Checksum's AI agent that writes API tests, including letting users choose which tests get created and adding safeguards so the agent can't report tests as passing unless they actually ran.
- Designed and built a Chrome extension and backend that turns narrated browser recordings into reviewable test drafts, with resumable uploads and asynchronous processing.
- Built an Azure DevOps integration to create linked bug tickets and synchronize status, with tenant-specific authentication, retries and recovery from interrupted ticket creation.
- Built scheduling, browser-test validation and failure recovery for automated upgrades of Checksum's test software across 72 customer applications.
- Designed and distributed an AI-assisted code linter with deterministic and AST-based validation, used daily by a 14+ engineer FDE team.
- Built and deployed an internal dashboard for test-execution scores, runtime trends and run-level investigation, backed by background aggregation and cached snapshots.

TeammateMe October 2023 - November 2024

Fullstack Developer

- Built internal admin-dashboard features with React, Next.js, Node.js and PostgreSQL.
- Implemented server-side rendering and maintained DigitalOcean CI/CD, pull-request review and merges.
- Instrumented Mixpanel and Google Analytics to support conversion analysis and A/B testing.

PROJECTS

rekordboxaz (Python, personal project, in active use): DJ-library pipeline that pulls Spotify and Beatport metadata, checks track identity with audio fingerprints, organizes files by genre and artist, and builds Rekordbox-ready playlists with reversible file replacement.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, SQL

Backend & infrastructure: Node.js, NestJS, PostgreSQL, Redis, BullMQ, Kubernetes/GKE, GitHub Actions, REST, WebSockets

Product & tooling: React, Next.js, Chrome extensions, Playwright, pytest, AST analysis, LLM agents, MCP

EDUCATION

University of California, Merced 2020

B.S., Human Biology

App Academy 2022

Full-stack software development program