

1. aicache

- Description: An AI CLI session caching system designed to enhance developer workflow efficiency by caching responses from various AI CLIs (Gemini, Claude, Qwen, OpenAI, gcloud, llm).
- Key Features: Advanced caching, intelligent argument parsing, persistent storage, comprehensive cache management (`list`, `inspect`, `clear`, `prune`, `stats`), interactive tools, shell integration, semantic search using embedding models, behavioral analytics, predictive prefetching, multi-modal support (images, notebooks, audio, video), enhanced security (PII detection, data sanitization), and performance optimization.
- Technology: Python.

2. AI Education Platform (aiteach)

- Description: An innovative AI/ML education platform offering personalized learning paths based on user proficiency levels. It integrates educational content from leading academic institutions and industry leaders.
- Key Features: Proficiency assessment, adaptive course recommendations, content with progressive difficulty, level-based organization (Beginner → Intermediate → Advanced), secure JWT-based authentication, full CRUD for courses and lessons, progress tracking, gamification (badges, points), community forum, and responsive design.
- Technology: Backend uses FastAPI (Python) with PostgreSQL and Docker. Frontend is a Flutter cross-platform mobile and web application.

3. Classic Games - World-Class Cross-Platform Gaming Suite (classic-games-monorepo)

- Description: A unified monorepo featuring graphics-rich implementations of classic card and board games with realistic 3D graphics and online multiplayer.
- Key Games: Poker (Texas Hold'em), Backgammon, Scrabble.
- Key Features: Realistic 3D graphics with physics, cross-platform (iOS, Android, Web), online multiplayer with matchmaking, real-time synchronization, offline AI opponents, sound effects, haptic feedback (mobile), and responsive design.
- Technology: Frontend: React, React Native, Next.js, TypeScript, Three.js, React Three Fiber, Expo GL. Backend: Node.js server with WebSocket support. Monorepo management with Turborepo.

4. Echo - Audio Memory Platform (echo)

- Description: A mobile-first application that intelligently and passively records audio, using AI to transcribe, identify speakers, and tag key moments automatically. It aims to make memories searchable and reliable for generations.
- Key Features: One-tap ambient recording, AI transcription with speaker diarization, chronological Echo Stream, universal search (by spoken words, speakers, dates, topics), memory curation (favorites, daily rewinds), secure sharing (private, expiring links), and privacy-first (end-to-end encryption, user control).
- Technology: Backend: Node.js with Express, PostgreSQL with full-text search, Google Cloud Platform (Cloud Storage, Speech-to-Text API, Cloud Natural Language API), JWT authentication. Frontend: React (planned).

5. Little Canvas - World's #1 Kids Super App (littlecanvas)

- Description: A comprehensive kids' application for ages 3-8+ that combines coloring, storytelling, learning modules, rewards, and offline activities in a safe, engaging platform. It's enhanced with AI-powered personalization, global localization, and advanced safety features.
 - Key Features: Advanced creative tools (multiple brush types, shapes, symmetry, layers, stickers), AI-powered learning system (personalized content, adaptive difficulty, learning pattern recognition), global localization (10+ languages, cultural adaptation), ultimate safety & privacy (COPPA/FERPA compliant, zero data collection from children, enhanced parent gate), offline-first architecture, comprehensive learning system, advanced gamification & rewards, creative storytelling platform, seasonal content, offline activity integration, inclusive accessibility, social & family features, and an enhanced parent dashboard.
 - Technology: Frontend: React Native for cross-platform (iOS & Android) with Redux Toolkit. Backend: Firebase for authentication and data storage, serverless functions, AI/ML components for personalization.
6. NexusComm - The Ultimate Unified Communication Platform (nexuscomm)
- Description: A comprehensive unified communication platform that consolidates all personal, professional, and social digital communications into one intelligent, organized stream, aiming to eliminate app-switching fatigue.
 - Key Features: AI-powered intelligence (smart response suggestions, emotion detection, automated scheduling, intelligent automation), unified communication (single inbox, thread consolidation, cross-platform messaging across WhatsApp, Email, SMS, Instagram, LinkedIn), enterprise-grade security (end-to-end encryption, zero-knowledge architecture, advanced privacy controls, GDPR, HIPAA, SOC2 compliance), business intelligence (integrated CRM, sales pipeline tracking, analytics dashboard), and accessibility (voice navigation, screen reader support, high contrast mode).
 - Technology: Microservices architecture. Backend: Node.js 18+ with Express.js, PostgreSQL with TypeORM, Redis, Socket.IO, Bull.js, OpenAI GPT models. Frontend: React Native with Expo (mobile), React with TypeScript (web). DevOps: Docker, Kubernetes-ready, GitHub Actions.
7. P2P Gear Rental Platform (p2p-gear-rental)
- Description: A modern peer-to-peer marketplace for renting photography and videography equipment, enabling users to list their gear and discover equipment from other creators in their area.
 - Key Features: Gear listings (photos, pricing, availability), advanced search filters, rental management (requests, approvals, status tracking), user profiles, secure payments via Stripe, and Supabase-powered authentication. Planned features include real-time messaging, reviews, and location services.
 - Technology: Frontend: Next.js 15, React 19, TypeScript, Tailwind CSS. Backend & Database: Next.js API Routes, Prisma ORM, PostgreSQL, Zod. Authentication & Payments: Supabase, Stripe. Development & DevOps: Jest, Playwright, ESLint, Docker, GitHub Actions.
8. Universal Agent Builder (UAB)

- Description: A web-based application for creating AI agents from prompts, supporting A2A (Agent-to-Agent Protocol), ADK (Agent Development Kit), and MCP (Model Context Protocol) frameworks.
 - Key Features: Interactive agent creation via a guided interface, support for multiple AI frameworks, pre-built templates for common agent types, auto-framework selection, real-time configuration forms, built-in mock testing environment, state persistence (localStorage), export functionality (JSON), and multiple deployment configuration options (Local, Cloud, Container, Edge).
 - Technology: Vanilla JavaScript for the web application.
9. Vibe Coding Charter (vibecharter)
- Description: A comprehensive governance framework designed to transform AI from a spontaneous automaton into a disciplined, architecture-aware co-pilot, addressing the challenge of harnessing AI's speed without sacrificing long-term architectural integrity.
 - Key Principles: Four core architectural principles (Separation of Concerns, Domain-Driven Design, Clean/Hexagonal Architecture, High Cohesion, Low Coupling) and five non-negotiable rules (e.g., zero business logic in infrastructure components, interface-first development, mandatory testing for AI-generated code).
 - Key Features: Layered defense mechanism for architectural discipline, prevention of abstraction gaps, advanced prompt engineering guidance for AI, and introduction of an "Intent Engineer" role for architectural governance.
 - Technology: Primarily a conceptual framework and documentation project, not a software application with a distinct tech stack for its implementation.
10. Lucent (NextGenMediaManager)
- Description: A cutting-edge iOS application that revolutionizes media organization through comprehensive AI-powered features, including duplicate detection, semantic search, photo clustering, and intelligent insights. All processing is on-device for complete privacy.
 - Key Features: Intelligent tagging (Gemini AI, MLKit), smart collections, natural language search, OCR text recognition, semantic embeddings (CLIP), NIMA-powered aesthetic quality scoring, duplicate and near-duplicate photo detection, K-means photo clustering, ML insights, seamless CloudKit integration (sync, offline capability), and a modern SwiftUI interface. Future phases include consumer sharing, auto-generated albums, video montages, and advanced ML features like a centralized ML Hub.
 - Technology: iOS (SwiftUI, Photos Framework, CloudKit, Combine, Core Location, Vision Framework). External Services & ML Models: Google Gemini AI, Google MLKit, CLIP Embeddings, NIMA Model, custom ML models. Development: macOS 14+, Xcode 15+, iOS 17+ SDK.
11. WellnessApp - Enterprise-Grade Wellness Platform (wellness)
- Description: A comprehensive, production-ready wellness application with a secure Node.js backend API and a native iOS client. It empowers users to manage their mental, physical, and social wellbeing holistically.
 - Key Features: Backend: JWT authentication, user management, APIs for mood/sleep/workout/nutrition tracking, meditation library, habit system, real-time messaging (WebSocket), e-commerce (Stripe), file uploads (Google Cloud Storage),

security (rate limiting, input sanitization), and email service. iOS App: Guided meditation, mood/stress tracker with AI insights, breathing exercises, journaling, sleep/activity tracking, HealthKit integration, custom habit tracker, AI wellness assistant (personalized nudges, insights), community features (forums, challenges), biometric authentication, and personalized onboarding.

- Technology: Backend: Node.js 18+ with Express.js, MongoDB 5.0+, Socket.IO, Stripe, Google Cloud Storage, Nodemailer. iOS: iOS 16.0+, Swift 5.9, SwiftUI, MVVM architecture, Alamofire, Socket.IO Client, Core Data (encrypted), Keychain Services, HealthKit.

This list showcases a wide array of projects, demonstrating expertise in AI, mobile development, web development, cloud infrastructure, and various application domains.