Robert "Bert" Carroll

CTO | AI-Native Development | Accelerating Humans

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Executive Summary

Technology executive with 20+ years building scalable systems across Fortune 500 enterprises and startups. Since October 2024, co-founded Orbiit Recovery and pioneered AI-native development methodology achieving **40-50x cost efficiency** vs. traditional teams. Over the past year (October 2024 – Present), sustained high-velocity execution across multiple simultaneous initiatives: production HIPAA platform, co-founded Substance Use Disorder Foundation (SUDF) and created Digital Recovery Standard (DRS) certification (70% SOC 2/HITRUST overlap), fractional CTO practice, AI Archetypes Assessment, weekly podcast (11 episodes published with AI-generated pages and tools), paid speaking engagements, and 10+ website launches. Built **Signal**—a purpose-built project management platform for coordinating human + AI development teams.

Strategic Positioning - AI-Native Development:

- Demonstrated that AI-native development methodology doesn't require traditional software engineering background—leverages strategic thinking, architecture knowledge, and AI orchestration to achieve velocity
- Language-agnostic approach: reads code through AI layer, focuses on system design and business outcomes rather than language-specific implementation details
- Proof: built production HIPAA platform, created Signal, developed FastAPI tools, and coordinated multiple tech stacks (Django, Astro, FastAPI) simultaneously—all through AI-augmented development

Key Differentiators:

- **AI-Native Development Infrastructure:** Created Signal to manage distributed AI development teams, achieving sustained 15-20 story points/day velocity (3-4 developer equivalent) with peak performance of 48 points/day
- **Proven Capital Efficiency:** Compressed 6-month development cycles into 3-4 weeks; delivered 200+ story points in 10 weeks with <$500/month operational costs
- **Multi-Initiative Velocity:** Sustained high-velocity output over 12 months across startup co-founding, fractional CTO work, AI assessment development, weekly podcast production, paid speaking, 10+ websites
- **Strategic Technical Leadership:** 23 documented Architecture Decision Records (ADRs) covering security posture, payment architecture, and AI workflow integration—eliminating "CTO as single point of failure" risk
- **Cross-Industry Expertise:** Healthcare (HIPAA), Payments (PCI-DSS), Public Sector, Education—experienced in highly regulated environments

Professional Experience

Orbiit Recovery | Co-Founder & CTO

October 2024 – Present | Atlanta, GA (Remote)

Co-founded AI-powered SMS-based patient engagement platform serving substance abuse treatment facilities. Architected HIPAA-compliant multi-tenant SaaS platform and pioneered AI-native development methodology achieving industry-leading capital efficiency.

AI-Native Development Infrastructure & Leadership

- **Created Signal:** Purpose-built project management system for coordinating multiple AI coders (Claude Code desktop + mobile) alongside human developers—solving coordination problem that traditional tools (Jira, Linear) cannot address
- **Achieved 40-50x Cost Efficiency:** $100/day AI-augmented development vs. $3,600-4,800/day equivalent traditional team output
- **Sustained 15-20 Story Points/Day:** Personal velocity equivalent to 3-4 developers, with peak performance of 48 points/day (Oct 21, 2025: 7 P0 features, 56 files, 12,500+ lines shipped)
- **Documented Mobile Integration Workflow:** Enabled parallel development streams with zero merge conflicts, achieving 2.67 story points/hour sustained throughput

Signal: AI-Native Development Coordination Platform

- **Story Points-Based Velocity Tracking:** Replaced commit-count metrics (commit activity ≠ productivity in AI-augmented workflows)
- **Session Quality Rating System:** 5-dimension rubric (Productivity, Quality, Impact, Learning, Flow) enabling retrospective analysis and AI coder performance comparison
- **Real-Time Kanban + Timeline View:** Task status, effort estimation, risk factors, and blocking issue tracking optimized for AI coder context continuity
- **Estimation Calibration:** Improved forecast accuracy from ±100% variance to ±30% over 15 tasks through systematic retrospective analysis

Platform Architecture & Core Systems

- **Multi-Tenant SaaS Architecture:** Django/PostgreSQL/Redis/Celery with white-label deployment model supporting Organization → Region → Clinic → Patient hierarchy
- **Dual-Revenue Payment Architecture:** (1) Platform-managed capturing transaction economics, (2) Stripe Connect for organizational accounts earning 2-5% platform fee on $200-400 ARPU
- **SOBER Score AI:** Engagement-based risk detection algorithm with automated clinician escalation, reducing response time from 48 hours to 4 hours for at-risk patients
- **TCPA Compliance Engine:** Opt-out handling with audit trail, inbound message tracking, SMS receipt confirmation
- **Automated Patient Lifecycle:** Payment webhook → patient creation → course assignment → SMS delivery → SOBER Score tracking → risk alerting → clinician escalation

Infrastructure & DevOps Excellence

- **GitHub Actions CI/CD Pipeline:** Automated migrations, pre-commit hooks (Black/Flake8/Bandit), zero-downtime deployments to Azure App Service
- **Application Insights Monitoring:** Custom KQL queries for webhook volume analysis, patient engagement funnels, proactive system health alerts
- **Architecture Documentation:** 23 Architecture Decision Records documenting security posture, payment architecture, AI workflow integration—eliminating "CTO as single point of failure" risk
- **Infrastructure Optimization:** Redis Labs free tier (30MB, 150K user capacity), Azure App Service Basic tier—total <$500/month pre-revenue

Tech Stack: Django 5.1, Python 3.12, PostgreSQL (Azure Database), Redis Labs, Celery Beat/Worker, Astro, Tailwind CSS, HTMX, Azure App Service, GitHub Actions, Application Insights, Twilio API, django-allauth SSO, PCI-DSS SAQ-A compliance

> *Metrics & Performance: 80-100 story points/week sustained over 10 weeks (200+ total) | Zero production incidents on custom Django/PostgreSQL platform since launch | <5 minute mean time to detection | 95%+ uptime | Migrated from vendor platform (GoHighLevel) to custom Django for code ownership | 10 weeks inception to production | Successfully managed 3 parallel development streams with zero merge conflicts*

Independent Consulting & Fractional CTO Work

2025 – Present | Nashville, TN (Remote)

Following departure from i3 Verticals (September 2024), launched consulting practice alongside Orbiit Recovery co-founder role. Over the past year (October 2024 – Present), sustained high-velocity output across multiple simultaneous initiatives including startup platform development, fractional CTO work, AI assessment tool, weekly podcast production, and 10+ website launches.

College Decoded | Fractional CTO (2025 – Present)

- Strategic technology leadership for education technology platform helping students navigate college admissions and financial aid processes
- Advised on platform architecture and technology stack decisions for scalable SaaS deployment
- Guided technical due diligence for integration partnerships and data exchange protocols
- Mentored development team on modern web application best practices and CI/CD workflows

Accelerating Humans Podcast | Co-Host & Technical Lead (2025 – Present)

- **Weekly podcast exploring contemporary AI issues and remaining human in an AI world**
- **11 episodes published** (YouTube, Spotify, Apple Podcasts), 2 in production, 20-40 minute format, published every Thursday
- **Co-host & technical guru:** Partner handles production; Bert builds sites, tools, and pages
- **Key Differentiator #1:** AI-generated dedicated page for each podcast episode with show notes, resources, and key takeaways
- **Key Differentiator #2:** Immediately implementable tools created for each episode—listeners can use AI-powered utilities alongside content
- Topics: AI adoption, organizational change, human-AI collaboration, staying grounded in rapidly changing technology landscape

- Platform: acceleratinghumans.com (Cloudflare)

AI Archetypes Assessment | Principal Developer (2025 – Present)

- Rapid prototype built with fly.io + FastAPI + SQLite helping teams determine AI adoption readiness
- Research-backed assessment identifying organizational readiness, fears, and opportunities
- Strategic AI adoption consulting for healthcare, education, professional services
- Currently being revamped for production deployment using Django/PostgreSQL/Azure stack
- **Development Approach:** Two-stage methodology—rapid prototypes with fly.io/FastAPI/SQLite or Netlify for proof-of-concept, then production migration to Django/Azure/PostgreSQL for scale and enterprise requirements

Speaking Engagements

- **BA Development Days (BADD) - Multi-Chapter IIBA Event (2025):** Delivered paid speaking engagements at collaborative event sponsored by 9 IIBA chapters on AI-augmented business analysis workflows, translating technical complexity into executive decision-making frameworks, and managing distributed teams across remote and hybrid environments

Substance Use Disorder Foundation (SUDF) | Co-Founder & Standards Developer (2025 – Present)

- **Co-founded and created industry certification standard for digital recovery programs** (comparable to IIBA establishing professional standards for Business Analysis)
- **Digital Recovery Standard (DRS) Certification:** 100-point evaluation framework across 5 categories:
  - Regulatory Compliance (26 points) – HIPAA, 42 CFR Part 2, state regulations, data privacy
  - Clinical Excellence (26 points) – Evidence-based practices, clinical protocols, crisis management, staff credentials
  - Technology Security (22 points) – Infrastructure, encryption, access controls, incident response
  - Peer Support (16 points) – Community moderation, specialist training, user safety
  - User Experience (10 points) – Accessibility and person-centered design
- **Three certification tiers:** Recognized ($5K-$8K, 12 months), Certified ($15K-$25K, 18 months), Accredited ($30K-$50K, 24 months) —revenue-generating certification body
- **70% overlap with SOC 2 Type II and HITRUST** requirements while focusing on what matters most: clinical quality and patient safety
- **8-10 week assessment timeline:** Documentation review, security assessment, clinical evaluation, platform testing
- Demonstrates regulatory expertise (HIPAA, 42 CFR Part 2) and establishes market positioning through professional credibility standards
- Platform: sudf.us / recoveryecosystem.ai

Recent Projects & Thought Leadership

- acceleratinghumans.com (Cloudflare) - Weekly podcast (11 episodes) + AI Archetypes Assessment rapid prototype (fly.io + FastAPI)
- thementalstack.com - Writing on cognitive load, system design, and clarity in technology leadership
- **10+ websites total** launched supporting consulting, thought leadership, SUDF certification framework, and project exploration
- **Rapid Prototyping → Production Pattern:** Consistently use fly.io/FastAPI/SQLite or Netlify for proof-of-concept validation, then migrate successful projects to Django/Azure/PostgreSQL for production scale

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i3 Verticals | Nashville, TN

January 2020 – September 2024 | $370M revenue publicly traded payment solutions company (NASDAQ: IIIV)

Manager, IT Service Delivery (January 2024 – September 2024)

Corporate IT Manager with responsibilities across IT, Corporate Finance, Payment Card Industry, Healthcare, Compliance, Government, Non-Profit, and Education verticals.

- **Product Owner for Atlassian Products:** Managed team of Jira Administrators for Jira, JSM, Confluence, Atlas governance across development teams (onshore + offshore)
- **Business Systems Leadership:** Identified, vetted, procured, and deployed business systems improving operational efficiency
- **Vendor Relations & Negotiations:** Managed vendor relationships and contract negotiations for assigned business systems
- **IT Time Reporting:** Led capitalization tracking for Software Development time reporting across multiple teams

Manager, Business Analysis (January 2022 – January 2024)

Led team of Business Analysts assisting product teams across multiple company verticals in defining and ordering work.

- **Business Case Standardization:** Created processes, templates, and documentation for C-level executive project approval, bringing data-centric approach to project evaluation
- **Healthcare Revenue Cycle Management:** Participated in "triage" workshops improving RCM performance and facilitated data-driven business case generation

- **Cross-Functional Process Mapping:** Led workshops modeling payment processes, identifying risks and opportunities for improvement
- **PayFac/MOR Portfolio Management:** Worked with teams to improve Risk, Underwriting, Residual Calculation, Merchant Servicing, Reporting, Customer Service, Documentation, and Compliance operations
- **Large Portfolio Migrations:** Oversaw analysis and process mapping for >$1B portfolio migrations between processors
- **IT Governance Framework:** Partnered with VP of PMO to develop and implement IT governance framework and project management policies

Business Analyst (January 2020 – January 2022)

Corporate Business Analyst with broad responsibilities across Government, Payment Card Industry, Healthcare, IT, Non-Profit, Education, and Compliance verticals.

- Led and mentored BA team, defining corporate IT and project management policy
- Documented processes, tools, and templates for BA team standardization
- Assisted with interviewing and hiring for Corporate IT positions
- Trained Product Owners in Jira and Confluence usage aligned with PMO process
- Collaborated with C-level executives establishing and prioritizing IT development roadmap

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Fresenius Medical Care | Atlanta, GA & Franklin, TN

February 2014 – October 2019 | $13B revenue publicly traded healthcare company (NYSE: FMS)

Business Systems Analyst (Corporate Revenue Cycle) (December 2015 – October 2019)

Promoted to Corporate level to scale regional projects across all Billing Groups / Revenue Centers, Centers of Excellence, and Teams.

- **SharePoint Enterprise Management:** Managed end user side of SharePoint installations for Corporate AR and 5 Revenue Centers billing and collecting $2.17 billion in healthcare receivables
- **SharePoint 2010 → Online Migration:** Coordinated migration for thousands of users, hundreds of sites, large amounts of workflow and data for critical processes—functioned as point person communicating with all management levels
- **Cross-Functional Project Delivery:** Worked with teams including IT, Social Workers, Financial Coordinators, Clinics, Patient Admissions Services, Pharmacy, Strategic Operational Support, and Coding
- **National Program Deployment:** Expanded American Kidney Fund project from regional to national deployment, scaling to meet requirements of multiple Directors with different business processes
- **Workflow Automation:** Created SharePoint Lists eliminating shared Excel documents, automating tasks and eliminating tens of thousands of emails from Revenue Center processes
- **Performance Dashboards & KPIs:** Provided scorecards and real-time analytics to management for data-driven decision-making
- **Medicare Coordination of Benefits:** Worked with Policy and Procedures team creating uniform Verifications of Benefits form used by all Revenue Centers, preventing void/rebill situations causing write-offs

Earlier Roles (2014-2015)

- Billing Group Analyst (April 2015 – December 2015)
- Senior Patient Account Representative / Analyst (February 2014 – March 2015)

Education

Bachelor of Business Administration (BBA), Accounting
Georgia Southern University - College of Business Administration
Bell Honors Program Scholarship recipient (Academic Scholarship limited to 18 students/year)

Professional Affiliations & Leadership

International Institute of Business Analysis (IIBA)
VP of Technology, Nashville Chapter (2022 – Present) | Member since 2020 | Paid speaker at BA Development Days (sponsored by 9 IIBA chapters)

Technical Proficiencies

Languages & Frameworks:
Python (Django, FastAPI), JavaScript (Astro, HTMX, React), SQL (PostgreSQL, SQL Server)

Cloud & Infrastructure:
Azure (App Service, Database, Application Insights), GitHub Actions, Docker

Development Tools:
Git, VS Code, Claude Code, GitHub, Jira, Confluence

Business Intelligence:
Power BI, Excel (Advanced), SQL Analytics

Project Management:
Signal (proprietary), Jira, Confluence, Atlas, JSM

Payment Systems:
Stripe (Checkout, Connect), Wix Payments, Klarna, Afterpay, Twilio

Compliance & Security:
HIPAA, PCI-DSS, TCPA, SOC 2, HITRUST, django-allauth, OAuth 2.0

Awards & Recognition

- **Eagle Scout:** Boy Scouts of America
- **Bell Honors Program Scholarship:** Georgia Southern University (limited to 18 students/year)

Key Competencies

Technical Leadership: AI-native development methodology, system architecture, multi-tenant SaaS, payment systems integration, HIPAA/PCI compliance

Strategic Execution: Capital efficiency optimization, rapid prototyping, ADR documentation discipline, technical debt management, exit-ready documentation

Team & Process Management: Distributed team coordination (human + AI), Agile/Scrum methodologies, business analysis, change management, vendor negotiations

Cross-Functional Collaboration: C-suite stakeholder management, business case development, cross-functional workshop facilitation, technical translation for non-technical audiences

Industry Expertise: Healthcare (Revenue Cycle Management, HIPAA), Behavioral Health, Payment Card Industry (PCI-DSS), Public Sector, Education, Non-Profit