

BRANDON MCCARTHY

AI Solutions & Implementation Engineer | Enterprise AI Workflows

Maryville, TN | Relocating to Cary, NC upon offer | 865-712-8581 | bmac96.dev@gmail.com

[LinkedIn](#) | [GitHub](#) | [Portfolio](#)

SUMMARY

AI solutions and implementation engineer building reliable LLM workflows, integration systems, and full-stack applications in TypeScript and Python. Translates messy requirements and operational data into schema-validated, evidence-backed outputs with human approval, evaluation, and audit controls. Currently evaluates model outputs on contract with micro1; five years in healthcare documentation developed rigor with complex records, privacy, and stakeholder communication.

TECHNICAL SKILLS

AI & LLM Delivery: AWS Bedrock, Claude/OpenAI APIs, RAG/pgvector, structured outputs, Zod, LLM evaluation, prompt versioning, human review
Integration & Reliability: REST APIs, webhooks, S3/SQS, Redis/BullMQ, retries/backoff, Retry-After, DLQs, idempotency, audit trails
Engineering: TypeScript, Python, SQL, React/Next.js, Node.js, FastAPI, PostgreSQL, Prisma, Drizzle, Docker
Security & Testing: multi-tenancy, RBAC/RLS, OIDC/SCIM, PHI redaction, HMAC, Playwright, Vitest, pytest, CI/CD

SELECTED PROJECTS

Enterprise AI Implementation Workbench

[Case Study](#) | [GitHub](#)

Next.js · TypeScript · PostgreSQL/Drizzle · AWS S3/SQS/Bedrock · pgvector · Zod · Playwright

- Built a multi-tenant implementation platform that turns customer requirements and uploaded documents into cited, schema-validated delivery plans; a human approval gate controls task materialization.
- Ran AI work through S3, SQS, Bedrock, pgvector, retries/DLQ, and prompt-versioned evaluations; enforced four-role RBAC, application scoping, PostgreSQL RLS, and append-only audit history.

Pulse | Healthcare Integration Reliability

[Verified CI](#) | [GitHub](#)

Next.js · TypeScript · PostgreSQL/Prisma · Redis/BullMQ · Claude API · Docker · Playwright

- Built an investigation workspace for four simulated healthcare connectors that detects incidents from rolling health windows and produces evidence-cited findings after PHI redaction and an independent leak check.
- Gated target-revalidated recovery behind human approval; added HMAC verification, deduplication, Retry-After-aware queues, audit history, 274 automated tests, and 19 offline evaluation fixtures.

IntakeFlow | Healthcare Document Intelligence

[Live Demo](#) | [GitHub](#)

Next.js · FastAPI · PostgreSQL · OpenAI API · SQLAlchemy · Docker · Pytest

- Built a FastAPI/Next.js workflow that extracts structured fields from synthetic healthcare PDFs with page-level evidence, confidence scores, and human review for uncertain or contradictory results.
- Added deterministic validation, prompt-injection checks, idempotent processing, audit history, and a 60-packet evaluation harness; deployed the public demo on Vercel and Render.

PROFESSIONAL EXPERIENCE

micro1 | AI Trainer (Contract)

Jul 2026–Present | Remote

- Evaluate AI model outputs against detailed rubrics and project specifications, writing structured feedback that supports model training.
- Apply quality criteria consistently across varied task types and flag ambiguous requirements or edge cases.

Physician Life Care Planning | Production Specialist / Transcriptionist

Sep 2023–Present | Remote

- Prepared structured reports from complex clinical records for physicians and legal teams, averaging about 30 cases each month.
- Traced missing or conflicting source details and documented needed clarifications while following confidentiality and formatting requirements.

AQuity Solutions | Medical Scribe

Jul 2021–Sep 2023 | Remote

- Created real-time clinical documentation in EHR systems and resolved unclear details with providers.

EDUCATION & TRAINING

East Tennessee State University — B.S. Biology · Psychology minor · GPA 3.2

May 2018

App Academy — Full Stack Web Development Bootcamp

May 2025

Hack Reactor — Full Stack Web Development Bootcamp

Oct 2023

Coursera — Machine Learning Specialization (Andrew Ng)

Aug 2025