# AI Skills Gap Analysis

Hamilton County, Indiana · Workforce Readiness in the AI Economy

**7,800+**
AI-ADJACENT JOBS TODAY

**+51%**
AI SKILL DEMAND GROWTH (MONTHLY)

**61.8%**
BACHELOR'S DEGREE+ (#7 NATIONALLY)

**1.80x**
COMPUTER SYSTEMS DESIGN CONCENTRATION

April 2026 | Invest Hamilton County

DATA-DRIVEN DECISIONS FOR HAMILTON COUNTY

SECTION 01

## EXECUTIVE SUMMARY

Hamilton County possesses one of the strongest AI-readiness profiles in the United States — ranked #1 nationally on educational attainment among 292 comparable counties, with deep concentrations in professional services, technology, and healthcare. But readiness is not the same as preparedness. This analysis identifies where the county's workforce is strong, where gaps exist, and what it will take to lead in the AI economy rather than simply participate.

**7,800+**
AI-ADJACENT JOBS (SOC 15-XXXX + DATA/AI ROLES)

**+37.3%**
PROF/TECH SERVICES GROWTH (2019–2026)

**-5.7%**
INFORMATION SECTOR EMPLOYMENT DECLINE (YOY)

**$132K**
MEDIAN SOFTWARE DEVELOPER SALARY

**KEY FINDING**

Hamilton County's AI skills gap is not about basic talent — it's about **depth and specialization**. The county has an exceptionally educated workforce and strong tech employment, but faces three gaps: (1) a supply-demand imbalance in core AI roles like data scientists and ML engineers, (2) an AI literacy gap across non-tech industries that employ 80%+ of the workforce, and (3) a pipeline gap where K-12 CTE pathways have not yet adapted to AI-era occupations.

SECTION 02

## THE AI WORKFORCE LANDSCAPE

We categorize Hamilton County's workforce into three tiers of AI relevance. Understanding these tiers is essential for targeting investments.

### Tier 1: Core AI Occupations (Build, Deploy, Manage AI)

| OCCUPATION (SOC) | HC JOBS | GROWTH | MEDIAN SALARY | LQ | GAP SIGNAL |
|---|---|---|---|---|---|
| Software Developers (15-1252) | 1,624 | +37.3% | $132,864 | 1.80x | MODERATE — Strong supply, growing demand |
| Data Scientists (15-2051) | 305 | +165.8% | $108,000 | 1.3x | CRITICAL — Demand outpacing local supply 3:1 |
| Info Security Analysts (15-1212) | 373 | +153.0% | $112,000 | 1.5x | CRITICAL — Cybersecurity + AI convergence |
| Computer Systems Analysts (15-1211) | 1,031 | +25.0% | $98,000 | 1.4x | ADEQUATE — Stable pipeline |
| Database Architects (15-1243) | 189 | +18.5% | $143,712 | 2.1x | MODERATE — Small but concentrated |
| Network Support (15-1231) | 441 | +133.3% | $72,000 | 1.2x | MODERATE — Data center growth driving demand |

Sources: Lightcast Economy Overview Hamilton County 2026 · Lightcast Occupation Tables · BLS QCEW Q1 2025

### Tier 2: AI-Augmented Occupations (Use AI Daily as Power Users)

These workers don't build AI — they use it. AI is transforming their productivity, and employers who upskill these roles gain competitive advantage. This tier represents the **biggest workforce development opportunity** because of sheer scale.

| OCCUPATION CLUSTER | HC JOBS | AI AUGMENTATION EXAMPLES | UPSKILLING NEED |
|---|---|---|---|
| **Management Consultants** | 4,089 | AI-assisted strategy, automated market research, predictive modeling | Prompt engineering, AI output evaluation |
| **Financial Analysts & Advisors** | 3,200+ | Algorithmic trading, AI risk models, automated compliance | AI model interpretation, regulatory AI governance |
| **Marketing & Sales Managers** | 2,800+ | AI-driven personalization, predictive lead scoring, content generation | AI tool selection, data-driven decision making |
| **Engineers (All)** | 1,444 | Generative design, AI-assisted simulation, predictive maintenance | AI/BIM tools (Revit +43%), digital twin tech |
| **Healthcare Practitioners** | 8,500+ | Clinical decision support, diagnostic AI, EHR automation | AI-assisted documentation, AI output verification |
| **Accountants & Auditors** | 2,100+ | Automated reconciliation, anomaly detection, AI-assisted audit | AI workflow integration, exception management |

**SCALE OF THE TIER 2 OPPORTUNITY**

An estimated **22,000+ workers** in Hamilton County are in Tier 2 AI-augmented roles — occupations where AI fluency (not just literacy) will separate high performers from the rest within 2-3 years. These workers already have the domain expertise. What they need is structured AI upskilling aligned with their specific job context — exactly what DOL's AI Literacy Framework (5 content areas) is designed to address.

### Tier 3: AI-Impacted Occupations (Work Changes Around Them)

These occupations won't use AI directly but will be reshaped by AI's impact on their industries — through automation of adjacent tasks, AI-driven workflow changes, and shifting skill requirements.

| SECTOR | HC WORKERS | AI IMPACT PATHWAY | READINESS LEVEL |
|---|---|---|---|
| **Retail Trade** | 18,294 | Self-checkout AI, inventory automation, AI scheduling, demand forecasting | LOW |
| **Accommodation & Food** | 17,948 | Automated ordering, AI pricing, labor scheduling optimization | LOW |
| **Admin & Support Services** | 11,359 | Chatbot displacement, automated data entry, AI-driven facilities management | LOW |
| **Construction** | 9,789 | BIM/AI design, drone surveys, AI project management, safety monitoring | MEDIUM |
| **Manufacturing** | 7,644 | Predictive maintenance, quality control AI, cobot integration, digital twins | MEDIUM |
| **Transportation** | 4,200+ | Route optimization AI, autonomous vehicle transition, fleet management AI | LOW |

**THE 69,000-WORKER CHALLENGE**

Tier 3 represents approximately **69,000 Hamilton County workers** — 39% of the total employed — in sectors where AI will change the nature of their work within the next 3-5 years. These workers are overwhelmingly in occupations paying below the county median ($118K), with limited access to employer-sponsored training. This is the population that Power Up Indiana ($5K/worker for upskilling), InvestOnward (workforce re-entry), and the DOL's free AI literacy course (text READY to 20202) are designed to reach.

SECTION 03

## SKILLS DEMAND ANALYSIS

Lightcast job posting analytics reveal which AI-related skills are in highest demand in Hamilton County — and how fast that demand is growing.

### Fastest-Growing AI Skills in Hamilton County Job Postings


### AI Skills Mapped to DOL's 5-Area Framework

| DOL CONTENT AREA | LOCAL EMPLOYER DEMAND SIGNAL | CURRENT TRAINING SUPPLY | GAP ASSESSMENT |
|---|---|---|---|
| **1. Understanding AI Principles** | Baseline expectation in tech postings; emerging in healthcare/finance | Ivy Tech CS courses; limited non-tech offerings | MODERATE GAP |
| **2. Exploring Real-World Uses** | Industry-specific AI tools (BIM in construction, EHR-AI in healthcare) | Fragmented; employer-specific training only | LARGE GAP |
| **3. Directing AI Effectively** | Prompt engineering +51.5% monthly growth; AI tool configuration | No structured local offering identified | CRITICAL GAP |
| **4. Evaluating AI Outputs** | Data quality, bias detection, accuracy verification in professional services | Embedded in some university programs; absent from workforce training | LARGE GAP |
| **5. Using AI Responsibly** | AI governance, compliance, IP protection — growing in finance and healthcare | Limited to compliance-driven sectors; no general workforce offering | MODERATE GAP |

SECTION 04

## SUPPLY-SIDE ANALYSIS: THE PIPELINE

### Higher Education Computer Science Pipeline (Indiana Statewide)

| DEGREE LEVEL | 2018 | 2020 | 2022 | CHANGE | TREND |
|---|---|---|---|---|---|
| Bachelor's (CS/IT) | 5,096 | 5,432 | 5,708 | +12.0% | GROWING |
| Master's (CS/IT) | 1,142 | 1,202 | 1,348 | +18.0% | GROWING |
| Associate's (CS/IT) | 1,326 | 1,576 | 1,752 | +32.1% | GROWING FAST |
| Certificates (12wk–1yr) | 1,298 | 1,546 | 3,686 | +183.8% | SURGING |
| Doctorate (Research) | N/A | 122 | 140 | +14.8% | GROWING |

Source: NCES IPEDS Completions, CIP 110000, Indiana Statewide 2018–2022

**BRIGHT SPOT: SHORT-TERM CERTIFICATE SURGE**

Indiana's short-term IT/CS certificate completions nearly tripled from 1,298 to 3,686 between 2018 and 2022 (+184%). This is exactly the pipeline that Workforce Ready Grants and Power Up Indiana are designed to feed. The challenge: most certificate programs don't yet include AI-specific content. As DOL's new apprenticeship standards roll out, this pipeline will need AI modules.

### K-12 Pipeline (Hamilton County CTE)

Hamilton County's K-12 career and technical education pipeline is strong — 6 school corporations, 9 TPI career pathways, 450+ courses, 100+ Modern Youth Apprentices. But the AI integration gap exists here too.

| SCHOOL CORPORATION | ENROLLMENT | CTE PROGRAMS |
|---|---|---|
| Hamilton Southeastern | 22,000 | 13 CTE programs |
| Carmel Clay | 17,500 | Polytechnic model |
| Noblesville | 11,000 | Largest internship in IN |
| Westfield Washington | 8,500 | 31 pathways, A-rated |
| Hamilton Heights | 2,500 | SEAL accredited |
| Sheridan | 1,200 | 4-Star, free CTE tuition |

**K-12 AI GAP**

None of the 6 school corporations currently offer a dedicated AI or machine learning course pathway. Computer science courses exist but focus on traditional programming. The Hamilton Pathways Lab (Phase 1, active) is the vehicle to address this — mapping DOL's AI Literacy Framework to existing CTE pathways is a natural Phase 2 activity.

**OPPORTUNITY: CLNA INTEGRATION**

The Perkins V Comprehensive Local Needs Assessment (CLNA) framework already evaluates CTE program alignment with labor market demand. AI-adjacent occupations should be formally integrated into the CLNA indicator crosswalk for the next assessment cycle.

SECTION 05

## NATIONAL BENCHMARKING

Among 292 U.S. counties with populations above 250,000, Hamilton County's AI-readiness fundamentals are among the strongest in the nation — but the gap is in translating these advantages into AI-specific workforce outcomes.

**#1** EDUCATION SUBINDEX

**#7** BACHELOR'S DEGREE+

**#2** HS GRAD RATE

**#4** QUALITY OF LIFE SCORE

**#2** LOWEST POVERTY

### Competitive Advantage: Education as AI Foundation

Hamilton County's 61.8% bachelor's-degree-or-higher rate is the single strongest predictor of AI readiness. Workers with bachelor's degrees are 3x more likely to use AI tools at work (Stanford HAI, 2025) and 4x more likely to report positive productivity impacts from AI adoption (McKinsey Global Survey, 2025). The county's educational foundation means the **barrier to AI adoption is not capacity — it's access to structured training.**

SECTION 06

## CLOSING THE GAP: RECOMMENDATIONS

| GAP | TARGET POPULATION | RECOMMENDED ACTION | VEHICLE | TIMELINE |
|---|---|---|---|---|
| **Core AI talent shortage** | Data scientists, ML engineers, security analysts | Attract talent through Quality of Life positioning; partner with Ivy Tech on accelerated AI certificates | Alex Business Services, Ivy Tech, QoL Index | Q3-Q4 2026 |
| **Tier 2 AI fluency** | 22,000+ professional workers | Employer AI readiness consults; Power Up stacking for AI upskilling; sector-specific AI training modules | Alex Business Services, WorkOne, Power Up | Q3 2026+ |
| **Tier 3 AI literacy** | 69,000+ frontline workers | Promote DOL free AI course (text READY to 20202); integrate AI literacy into InvestOnward; partner with WorkOne on WIOA AI training | InvestOnward, WorkOne, DOL program | Immediate |
| **K-12 AI pipeline** | 62,700 students (6 corps) | Map DOL AI Framework to CTE pathways via HPL Phase 2; integrate AI into Modern Youth Apprenticeship | HPL, TPI, CLNA | 2026-2027 |
| **Apprenticeship AI integration** | 100+ youth apprentices + Artisanship cohorts | Add AI modules to existing apprenticeships; prepare for national intermediary standards | TPI, HAOI/Hub & Spoke, DOL contract | Q4 2026+ |
| **Employer awareness** | 13,465 private establishments | Distribute employer AI readiness brief; offer free consultations; convene sector roundtables | Alex Business Services, chambers | Q2-Q3 2026 |

### BOTTOM LINE

Hamilton County doesn't have an AI talent crisis — it has an **AI preparation opportunity**. The educational foundation is the strongest in the nation. The employer base spans every sector DOL is targeting. The infrastructure — from Alex to Hamilton Pathways Lab to WorkOne partnerships — is already built. What's needed now is a coordinated strategy to channel federal resources, activate employer engagement, and ensure that Hamilton County's workforce leads the AI transition rather than reacts to it. The federal government just provided the funding framework. IHC's role is to make it work locally.

Sources: Lightcast Economy Overview, Occupation Tables, Skills Analysis (Hamilton County 2026) · BLS QCEW Q1 2025 · NCES IPEDS Completions (CIP 110000, 2018-2022) · Census ACS 5-Year 2023 · National Benchmarking Index (292 counties, 130 fields) · O*NET Occupation Database · DOL TEN 07-25 AI Literacy Framework · Power Up Indiana Analysis (IHC, Mar 2026) · IHC WorkOne/DWD Synergy Guide · Hamilton Pathways Lab Source Index · CLNA Data Map · Stanford HAI AI Index Report 2025 · McKinsey Global Survey on AI 2025