LF 2025 State of Tech Talent Report

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Executive Summary

The 2025 Linux Foundation Tech Talent Report surveyed 556 global participants responsible for hiring and training technical talent. Key findings challenge AI job displacement fears and reveal critical workforce strategies.

Bottom Line: AI creates more jobs than it eliminates (current +21% net hiring effect). Organizations must prioritize upskilling over external hiring to address critical skill gaps.

Key Metrics:

- **68%** of organizations understaffed in AI/ML
- **65%** understaffed in cybersecurity
- **44%** cite lack of skilled workforce as a top barrier to tech adoption
- **19.2% (nearly one in five)** of new hires leave within 6 months
- **62%** longer to hire new staff than to upskill existing employees

Core Findings

1. AI Creates Jobs, Doesn't Eliminate Them

AI adoption shows consistent job growth. Organizations are **2.7x more likely to expand** than reduce their workforce due to AI, with a net hiring effect of **+21%**.

Reality Check: AI is reshaping existing roles, not just creating new ones. **67%** of organizations report that AI is driving significant changes to their technical work, requiring substantial upskilling of the current workforce.

2. Critical Workforce Shortages Block Innovation

A lack of in-house expertise is a top barrier to innovation, with critical talent gaps existing across organizations.

Most Understaffed Domains:

- AI & ML: **68%**
- Cybersecurity: **65%**
- FinOps & cost optimization: **61%**

AI Skills Crisis: The shortage of skilled professionals is particularly acute in AI/ML, with most organizations lacking the core skills to support their own AI initiatives.

3. Upskilling Beats Hiring Every Time

Organizations overwhelmingly favor developing their existing workforce, with upskilling being a key strategy for talent retention and faster project execution.

Why Upskilling Wins:

- **It's Faster:** The hiring and onboarding cycle for new talent takes **62% longer** than upskilling current employees.

- **Reduces Sunk Costs:** With **nearly one in five (19.2%)** new hires leaving within six months, investing in existing staff mitigates significant recruitment and onboarding losses.
- **Boosts Retention:** **91%** of organizations report that technical training is an effective method for retaining talent. Similarly, **84%** find that an open source culture is highly effective for retention.

4. Practical Skills Trump Credentials

The technology sector has shifted evaluation criteria away from traditional academic credentials toward demonstrable capabilities.

Hiring Priority Ranking:

- Relevant hands-on experience: **95%**
- Portfolios and examples of previous IT accomplishments: **85%**
- Certification of skills: **71%**
- Formal college or university degree: **65%**

Strategic Implications: Organizations that cultivate an open source culture benefit from stronger talent retention. To implement AI successfully, companies prioritize upskilling their existing workforce and leveraging open source frameworks, recognizing that combining institutional knowledge with new skills creates a significant strategic advantage.

Executive Recommendations

Five Strategic Priorities:

1. **Invest in Internal Talent** — Upskilling is significantly faster and more efficient than external hiring, and it helps retain institutional knowledge while reducing turnover risks.
2. **Build a Learning Culture** — Establish formal programs with technical training and certification support to create clear career paths that merge internal expertise with emerging skills.
3. **Prioritize Practical Skills** — Shift hiring to emphasize hands-on experience (**95%** importance), portfolios of practical work (**85%** importance), and technical certifications (**71%** importance) over traditional credentials.
4. **Leverage Open Source** — Implement culture initiatives that achieve **84% retention effectiveness** while accessing community-driven AI frameworks.
5. **Accelerate AI Readiness** — Address critical skill gaps in areas like AI/ML and cybersecurity through targeted upskilling to ensure safe and effective technology deployment.