# Bridging the Skills Gap in Pune: Preparing Youth for the Future of Work

## Introduction

Pune has been a hub for IT, the automobile industry, and higher education for over two decades, attracting foreign nationals and rural Maharashtrians alike. In 2025, Pune's population crossed 7.5 million, with over 60% under age 30 (World Population Review, 2025). It ranks third nationally for employable talent aged 18–21 at 68.7% (India Skills Report, 2025). This makes it urgent to leverage Pune's demographic dividend.

The skills gap here refers to mismatches between graduates' academic qualifications and employer needs—spanning technical expertise (e.g., AI, data science) and soft skills (e.g., problem-solving, adaptability). This brief explores the future of AI in Pune's tech industry, while citing national data from private-sector surveys. Through conversations with industry leaders, students, and business owners, it elaborates on the need for technical and soft skills development starting as early as high school.

## Methodology

Interviews were conducted by phone with five individuals in Pune. Participants were selected via convenience sampling due to time and logistical constraints. Verbal consent was obtained from each. The table below shows participant demographics:

| Title | Industry | Sex | Age |
|---|---|---|---|
| Undergraduate student | Mathematics major | Male | 20 |
| Industry leader | Fintech | Female | 48 |
| Industry leader | AI start-up | Male | 50 |
| Fitter engineer | Small-scale manufacturing | Male | 28 |
| Business owner | Small-scale manufacturing | Male | 53 |

Table 1: Participant Demographics

## AI Push Across Sectors

A first-year undergraduate mathematics student revealed that CBSE schools in Pune now offer skills-based courses for 9th- and 10th-grade students. These range from AI and coding to computer science and media studies, assessed via theory and practical board exams. Having studied AI basics in school, he felt prepared for undergraduate studies, applying AI to mathematical modeling. He also noted that coaching centers like Bakliwal Tutorials offer coding to 7th graders.

The public sector is boosting AI capacities. According to the *Economic Times* (2025), the Maharashtra government plans to deepen its focus on technology during its current term, centering AI and digital governance. This builds on its 2018 launch of the Information Technology Corporation Ltd. (MahaIT) as a public cloud service. MahaIT now provides cybersecurity and data control for state services, with headquarters in Pune—creating employment opportunities.

Private-sector AI investment is strong: 82% of respondents in PwC's *26th Annual Global CEO Survey: India Perspective* (2023) are investing in automation, and 85% in upskilling. Nineteen percent collaborate with academia for value creation. A C-suite leader at HSBC Pune confirmed tie-ups with

institutions like MIT Pune and Cummins, offering internships leading to full-time roles. These partnerships help students learn from experts, stay current, and plan careers. The *Future of Jobs Report 2025* notes corporate-driven generative AI training in India, with 67% of employers tapping diverse talent (World Economic Forum, 2025). Hiring now emphasizes skills over degrees. The IT sector contributes 10% to India's GDP (Sun, 2025).

Yet skill gaps persist—65% of organizations in the *Future of Jobs Report 2025* cite new-hire gaps as transformation barriers, with 38% expecting worse talent availability in five years. The *India Skills Report 2024* shows a 60–73% supply-demand gap for roles like machine learning engineers and data scientists (India Skills Report, 2024). AI and automation raise entry barriers (industry leader). Human-only tasks will drop from 48% in 2025 to 31% in 2030. "We are witnessing downsizing at many Pune tech companies, as AI handles entry-level tasks once filled by fresh graduates," said a start-up founder. This demands rapid reskilling/upskilling and industry readiness for new entrants.

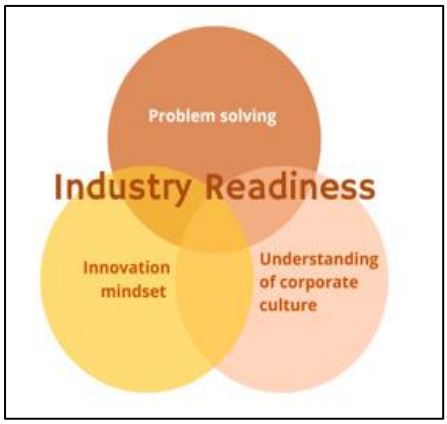
**Pune's Unique Position**

With public- and private-sector AI upskilling commitments in Pune and Maharashtra, where do gaps remain? Quote from fintech industry leader:

"We don't only look at your degree or grades when hiring. The technical exam is just part of the profile. We want problem-solvers who think on their feet and fit our culture."

Students have talent and qualifications but lack industry readiness—problem-solving, innovation, and corporate savvy. She noted many fail non-memorization interviews during campus drives.

"Schools lack creative thinking encouragement; we're marks-focused. Good marks help college entry but matter less for first jobs."




She seeks technical and cultural fits, stressing communication. ***Recommendation: Start early.*** Pursue internships amid Pune's corporate ecosystem for hands-on experience. "Magic happens at technology-domain intersections—neither alone suffices. "Use social media, alumni networks; build leadership for teamwork/adaptability. "Freshers underestimate agility in tech." Upskill via online courses; she did over her 25-year fintech career.

Core skills for the next five years include AI/big data, technological literacy, creative/analytical thinking, and resilience (World Economic Forum, 2025).

**Challenges and Opportunities in Pune's Manufacturing Sector**

Pune hosts vocational hubs like Industrial Training Institutes (ITIs) for affordable trade training. A fitter engineer, ITI graduate from his village, trained at Tata Motors, Mercedes-Benz, and Volkswagen for eight years but faced barriers without a degree or strong English. Now at a Bhosari plant, he values work dignity supporting his family and hopes better education for his children. AI remains irrelevant to his role.

Despite growth, manufacturing contributed just 1.3% to GDP in 2022–23 (vs. services' 14%; Bala & Thakur, 2024). Youth (15–29) employment grew by 1.65 million (2018–22), lagging agriculture's 12.48 million—indicating limited skilled-labor appeal.

A business owner invests in employee welfare but hesitates on training, despite German parent options. This lethargy challenges MSMEs but offers innovation opportunities to absorb youth via automation.

**Pathways Forward**

Pune stands at a crossroads: young talent meets AI investments, poised for work leadership. Yet mismatches, soft-skill neglect, slow traditional-sector innovation, and AI-reduced entry roles threaten this—as does the tech gender gap (33% female vs. 67% male; Bardhan & Routh, 2024).

**Key recommendations:**

- **Start early:** Embed technical/soft skills in curricula with hands-on exposure pre-job market. Make leadership, adaptability, and problem-solving pipeline essentials.
- **Strengthen school counseling** for aptitude-aligned paths, avoiding "aspirational traps" like exam coaching. These suit some but detour others from fulfilling trajectories.
- **Accelerate AI embedding**; upskill deeply in machine learning/generative AI for growth.

The "Oxford of the East" has ecosystem and talent for AI leadership—but the window narrows. Enhance training access, align education-industry, and foster collaborations to ready youth.

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