SBVC Open Lab Initiative

Stakeholder_Summary

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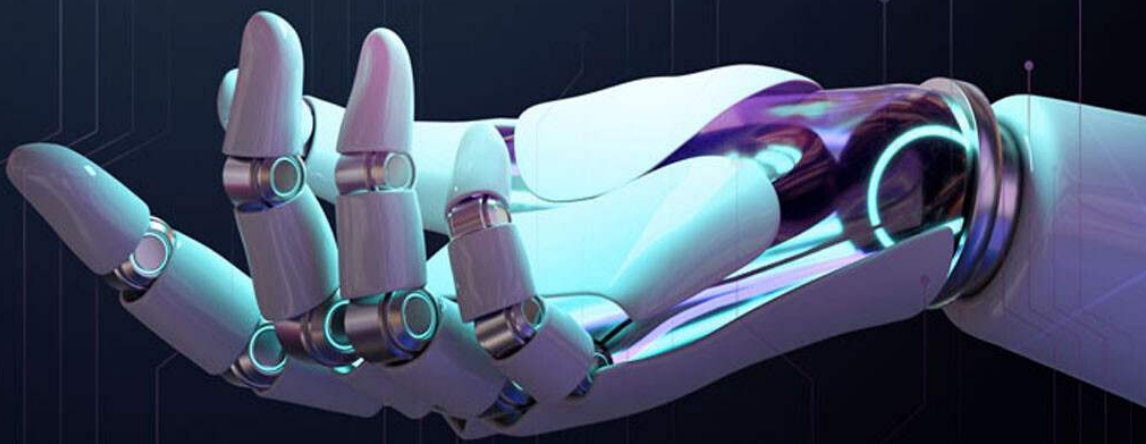

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Executive Summary

San Bernardino Valley College (SBVC) must invest in a dedicated computer lab to prepare students for 21st-century careers in Computer Information Technology (CIT) and Computer Science (CS). Despite our region's growing demand for skilled tech professionals, SBVC lacks the specialized infrastructure available at peer institutions and even local high schools. This document outlines the case for the Open Lab Initiative —a student-centered, innovation-driven response to that gap.

Benefits at a Glance:

- Hands-on learning that improves graduation and employment rates
- Attracts and retains tech-driven students
- Promotes interdisciplinary collaboration
- Equips learners with job-ready skills in cybersecurity, AI, cloud, and more
- Enhances SBVC's competitive standing

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Why the Open Lab?

SBVC's CIT/CS programs currently operate in shared classrooms with no lab technician and minimal equipment. Meanwhile, CSUSB, Chaffey, and RCC offer:

- 24/7 computer labs
- Makerspaces with 3D printers, laser cutters, and VR gear
- AI/Cybersecurity "living labs" and innovation hubs
- Remote access tools and industry-level software

Even Cajon and San Andreas High Schools offer STEM labs and 3D prototyping. If high schools are outpacing us, how can we attract and retain the next generation of tech leaders?

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Comparative Advantage Lost

Institution	Dedicated Labs	Makerspace	Remote Access
CSUSB	✅ Yes	❌	✅ Yes
Chaffey	✅ Yes	✅ Yes	✅ Yes
RCC	✅ Yes	❌	✅ Yes
Local HS	✅ Basic	✅ Yes	❌
SBVC	❌ No	❌ No	❌ No

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Impact on Student Success

Research shows:

- Students with lab access are 35% more likely to complete STEM degrees
- Internship success (often tied to hands-on lab prep) boosts degree completion by over 300%
- Colleges with tech labs see a 40% increase in industry certification rates

Without a modern lab, SBVC students face inequity in access, opportunity, and skill development.

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Interdisciplinary Innovation Hub

The Open Lab isn't just for tech students. It will support:

- Nursing students practicing telehealth simulations
- Art & design students learning digital fabrication
- GIS & Earth Science students applying drone data
- Entrepreneurship students prototyping products

Think: AI meets agriculture. Drones meet disaster response. VR meets psychology. That's what the Open Lab enables.

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Why We Need a Dedicated Lab Technician

A full-time lab technician ensures:

- Maintenance of servers, dev boards, software & licenses
- Support for student projects & faculty needs
- Inventory, updates, and equipment health
- Onboarding and guidance for hardware and tools

Reliance on unpaid volunteers is unsustainable for a modern lab.

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Why a STEM Center Isn't Enough

STEM centers are generalist support hubs. A CIT/CS lab is:

- Specialized
- Secure
- Software-equipped
- Infrastructure-heavy

Think: Dual monitors, networking racks, AI simulation environments—not just a tutoring center.

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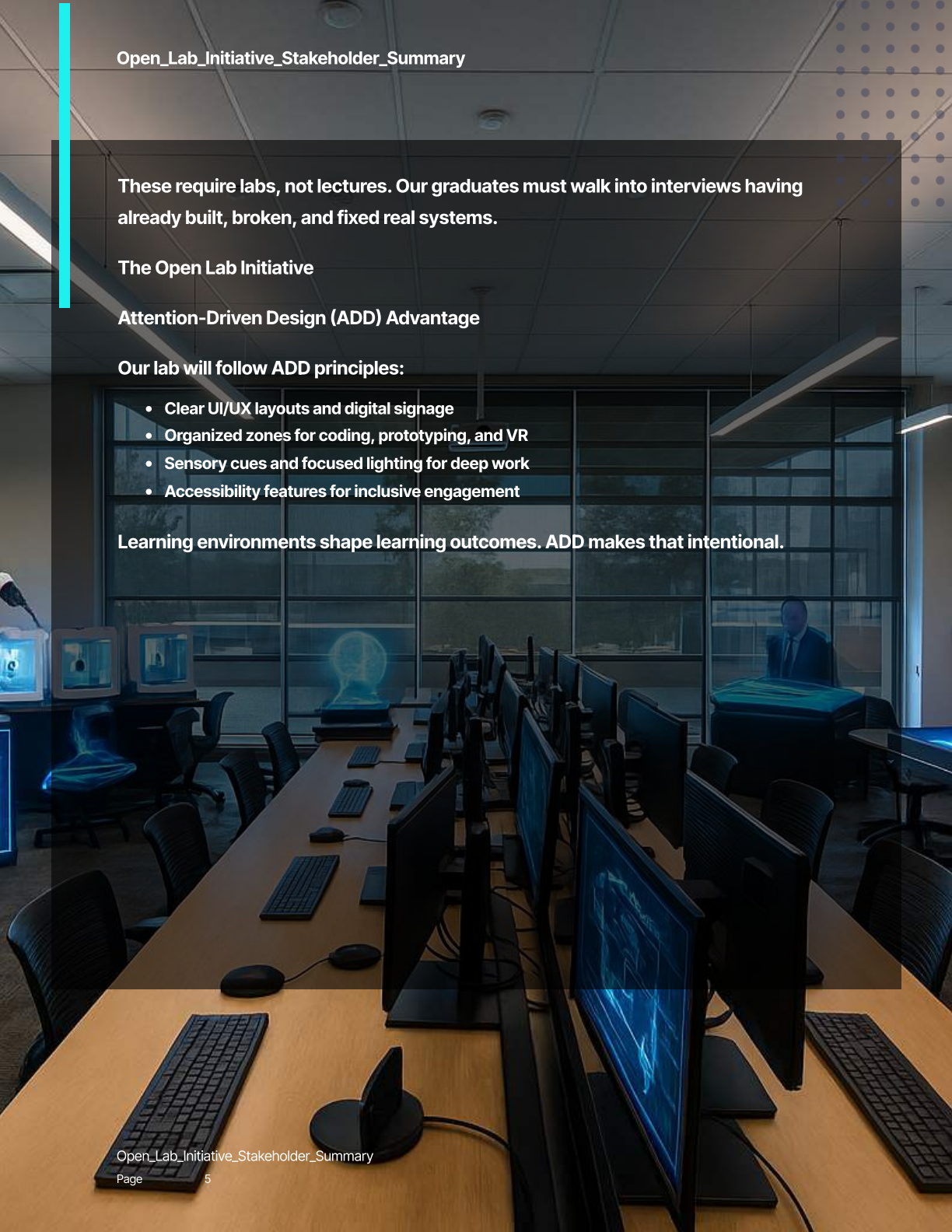
Industry Alignment

Top in-demand job skills:

- Python, Java, SQL, cloud systems (AWS/Azure)
- AI & machine learning frameworks
- Networking & cybersecurity protocols
- Virtualization & containerization (e.g., Docker)



These require labs, not lectures. Our graduates must walk into interviews having already built, broken, and fixed real systems.

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Attention-Driven Design (ADD) Advantage

Our lab will follow ADD principles:

- Clear UI/UX layouts and digital signage
- Organized zones for coding, prototyping, and VR
- Sensory cues and focused lighting for deep work
- Accessibility features for inclusive engagement

Learning environments shape learning outcomes. ADD makes that intentional.


AI

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Next Steps & Call to Action

SBVC must:

1. Allocate funding for a permanent lab space and technician
2. Approve the buildout plan based on proven needs
3. Promote the lab as a recruitment asset
4. Launch pilot programs for cross-departmental use

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Appendix: Key Reference Highlights

- Education Development Center (2022): Lab access increases STEM retention by 35%
- NCWIT (2021): Tech-focused community colleges saw graduation rate jumps of 29%
- UT Austin FRI: Hands-on science raised STEM degree rates from 71% to 94%
- Bureau of Labor Statistics: Computer jobs are projected to grow faster than all others