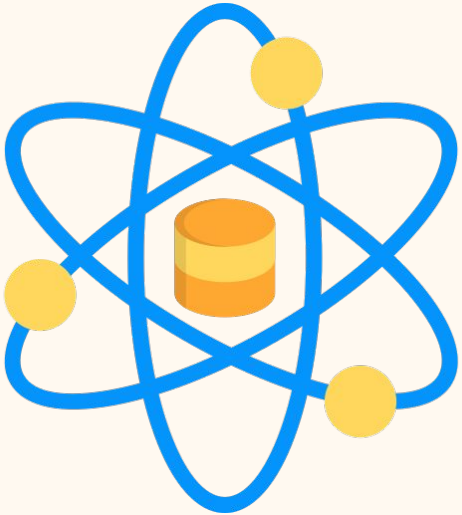
ACADENCE.

Advancing Data Science Academics

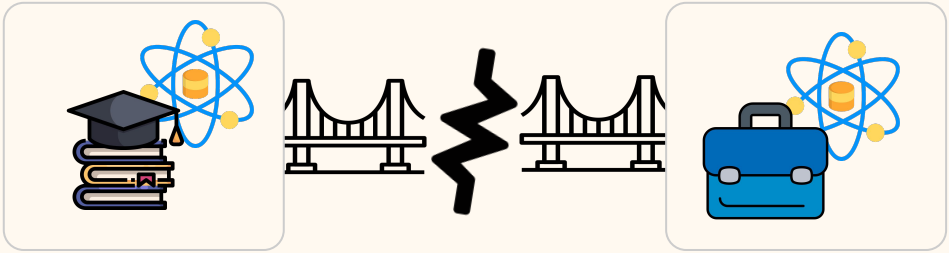


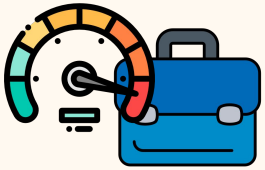
PM_Group 2: Brian Tinsley, Qizhen Li, Aaron Woo, John Genest

CONTENTS

PROBLEM

College Data Science programs lag behind industry practices.





Rapid Industry Shifts

Strategies, tools, data usage always evolving.

Professor Constraints

Limited time and resources for industry monitoring and application

Underprepared Students

Lack exposure to current professional practices, tools and principles

VVP

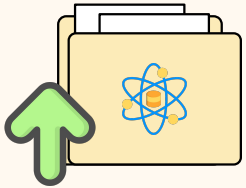
Professional data science is always advancing.

Keep your courses and students industry-aligned with

ACADENCE

Close the gap with industry-vetted course analysis and improvements. On-demand. In minutes.

1 Upload.

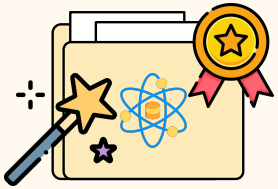


- Course Syllabus
- Current Datasets
- Tool Selections

2 Assess.

- What's Current
- What's Outdated
- What's Missing

3 Enhance.



- Better Data & Tools
- Action Priorities
- Implementation Plan

Free For Professors

5-Minute Setup

Actionable Insights

SOLUTION

Acadence **is an AI-powered teaching assistant that helps professors modernize their data science curriculum in minutes.** Academce analyzes course materials (syllabi, lectures, exams, assignments, etc.) and suggests new teaching material, tools, datasets, and real-world projects that align with market needs in data science careers.

Saves Professors Hours — Automates curriculum updates, grading rubrics, and project design so instructors can focus on teaching, not tedious prep work.

Makes Programs More Competitive — Helps departments attract more students and stand out with modern, industry-aligned courses that reflect the latest in AI and data science.

Boosts Student Career Readiness — Ensures students graduate with hands-on experience and skills that match current job market demands.

CUSTOMER PROFILE

Dr. Ethan Park

Associate Professor of Data Science

About

- 42
- Phd
- San Francisco
- Non-Binary
- Professor
- Married

Meticulous | Assertive | Energetic | Helpful | Creative | Tech Savvy

Motivations

Dr. Park wants to keep his courses relevant to the rapidly evolving field of data science. He hopes his students can apply what they learn to practical problems, but he often struggles to find time to update materials or explore new tools.

Goals

- Modernize curriculum to reflect current data science practices.
- Save time in updating lectures, assignments, and grading.
- Improve student engagement and outcomes through relevant, hands-on projects.
- Enhance course reputation to attract more graduate students and funding.

Pain Points

- "It's almost impossible to keep up with all the new technical trends while managing a big lab and teaching full-time."
- Spends too much time grading and preparing instead of mentoring or conducting research.
- Assignments are outdated, and students easily solve them with ChatGPT or online solutions.
- Students complain that coursework doesn't connect to real-world applications.

Personality

Introvert	Extrovert
Analytical	Feeling
Structured	Prospecting
Assertive	Turbulent
Intuitive	Observant

Technical Skills

Academic research tools

Programming and data science platforms

Moderate familiarity with AI tools and automation platforms

Key quote

"Because many students, they cannot connect the knowledge they studied in the class and then the actual class project they are performing... But if somebody is monitoring and give some kind of small advice, then suddenly they realize that, oh, well, this is the minimum, you know?"

MARKET

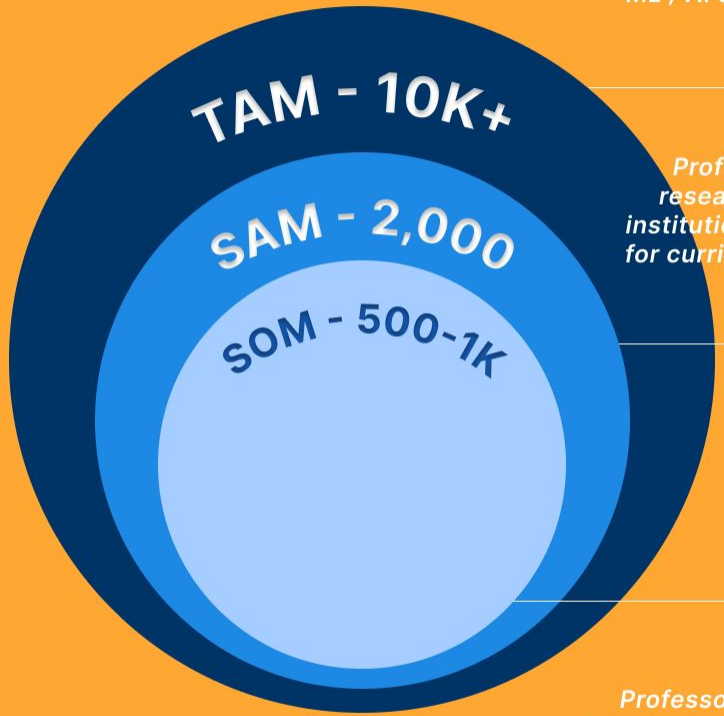
Bridging the Curriculum Gap in Data Science Education

Professors and STEM students need up-to-date AI and data-science training, yet most programs still lag behind industry trends

Across the US, thousands of professors teach data science and AI related courses - yet many struggle to keep curricula aligned with industry tools, datasets, and LLM-driven methods. This creates a massive opportunity for Acadence to help bridge the academic-to-industry gap.

By starting with professors (bottom-up adoption), Acadence can scale its reach to programs, departments, and institutions — modernizing how AI and data science are taught.

From 10,000+ professors teaching Data Science or ML (TAM) to 2,000 professors realistically reachable through top 150 institutions (SAM), Acadence can serve 500–1,000 early adopters in the first 5 years (SOM).



Professors teaching data science / ML / AI courses in the US

Professors at priority research and teaching institutions with budgets for curriculum innovation

Professors likely to adopt Acadence within 5 years via conferences, pilots, and networks

Estimates based on U.S. higher-ed data science faculty and institutional distribution; rounded for clarity.

COMPETITION

AI
AUTOMATION LEVEL

DOMAIN
SPECIALIZATION

ACADENCE

Instructure.

Deepnote

COURSETUNE

Podium
Education

Labster

datacamp

BUSINESS MODEL

Development Vision

From Professor Tool to Industry-Academia Platform

Phase 1: “Land”

- **Years 1-2**
- **Target: 50-100 Professors**

- Launch free tool
- Build trust with innovative faculty
- Aggregate industry insight data

- **Goal: Product-market fit**
- **Metric: Active users**

Phase 2: “Expand”

- **Years 2-3**
- **Target: 500-750 Professors**

- Introduce premium features ($50-100/mo)
- Add collaboration & benchmarking
- 10% paid conversion

- **Goal: $300K ARR**
- **Metric: Conversion rate**

Phase 3: “Scale”

- **Years 4-5**
- **Target: 1,500 Professors > Institutions**

- Department/university licenses
- Expand to CS, stats, business analytics
- Industry partnerships

- **Goal: $1-2M ARR**
- **Metric: Institutional deals**

FINANCIALS

3-Year Pro Forma

Item	Jan 2026	Apr 2026	Jul 2026	Oct 2026	Jan 2027	Jun 2027	Jan 2028	Jun 2028	Dec 2028
# of Professors	5	20	40	80	150	300	500	800	1200
Revenue ($100 per professor/yr)	**$0**	**$2,000**	**$4,000**	**$8,000**	**$15,000**	**$30,000**	**$50,000**	**$80,000**	**$120,000**
Expenses									
API & LLM Costs (10%)	$0	$200	$400	$800	$1,500	$3,000	$5,000	$8,000	$12,000
Storage / Infra	$50	$100	$150	$250	$400	$600	$1,000	$1,500	$2,000
SG&A									
Marketing	$0	$200	$500	$1,000	$1,500	$2,500	$4,000	$6,000	$8,000
Part-time LLM Engineer	$0	$1,000	$1,000	$1,000	$1,000	$1,000	$1,500	$1,500	$2,000
Total Expenses	**$50**	**$1,500**	**$2,050**	**$3,050**	**$4,400**	**$7,100**	**$11,500**	**$17,000**	**$24,000**
EBITDA	**-$50**	**$500**	**$1,950**	**$4,950**	**$10,600**	**$22,900**	**$38,500**	**$63,000**	**$96,000**

Assumptions:

First 5 professors free (pilot)
Each professor pays $50 per use, 2× per year
API/LLM costs ~10% of revenue
Storage: small fixed costs increasing with users
Marketing: grows as product gains traction (ads, demos, conferences).
Part-time LLM engineer: ~$1k per quarter for maintenance + fine-tuning
Founders unpaid; no office rent.

USE OF FUNDS

40% — Hire a Part-Time AI Engineer
To optimize our LLM workflows, fine-tune models, and improve curriculum analysis accuracy.

25% — Model Training & API Costs
Covers OpenAI/Anthropic API credits, data preprocessing, and cloud compute for early professor usage.

20% — Marketing & University Outreach
Targeted ads, email campaigns, and conference attendance to attract early-adopter professors and departments.

10% — Infrastructure & Hosting
Cloud servers, storage, and monitoring tools needed to support growth and maintain reliability.

5% — Legal, Admin, & Miscellaneous
Basic entity setup, contracts, and buffer for unexpected expenses.

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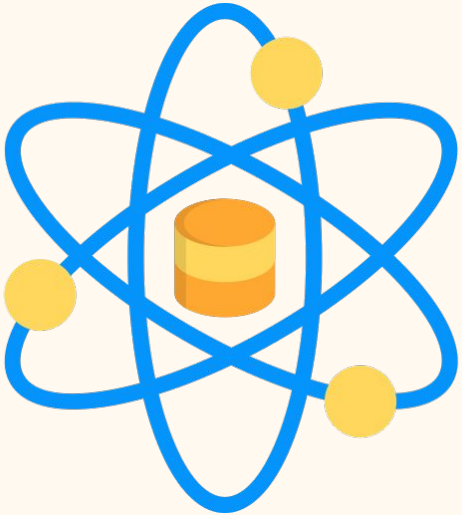

FUTURE DIRECTION

Expanding Beyond Data Science

- Adapt the Acadence engine to other fields — other STEM subjects and beyond — to modernize entire programs.
- Build domain-specific AI models trained on discipline-relevant materials.

Institutional Partnerships

- License Acadence as a **curriculum modernization platform** for universities and professional training programs.
- Integrate with LMS platforms (Canvas, Blackboard, Moodle) for seamless adoption at scale.

Evolving Business Model

- Transition from per-professor pilots to **institutional subscriptions** (per department or per seat).
- Offer **custom enterprise tiers** with analytics dashboards, faculty training, and AI co-pilots for curriculum design.
- Potential to introduce a **marketplace** for datasets, projects, and teaching modules.