

From Data to AI-Driven Business Impact

A curriculum designed to build in-demand skills, apply them to real business challenges, and advance your career in the AI era.

AI-INTEGRATED CURRICULUM



AI concepts and tools built into every stage



Ethical AI and responsible data practices



Real-world data, modern technology, measurable impact



Hands-on experience that employers value

1. ESSENTIALS

Build the analytics and machine learning foundation

Courses

- ISBA 2401: Data Analytics with Python
- ISBA 2403: Machine Learning with Python

Key Skills You'll Build

- ✓ Data wrangling, visualization, and exploratory analysis
- ✓ Machine learning fundamentals and modeling techniques
- ✓ Data-driven problem solving and business insight

WHAT YOU CAN DO

Transform raw data into meaningful insights and predictive models to inform business decisions.

2. BUILD AI EXPERTISE

Go deeper in high-demand AI domains that matter

Courses

- ISBA 2414: Deep Learning
- ISBA 2144: Natural Language Processing
- ISBA 2145: Reinforcement Learning

Key Skills You'll Build

- ✓ Neural networks, computer vision, and deep learning
- ✓ NLP, embeddings, LLMs, and text analytics
- ✓ AI decision-making with reinforcement learning
- ✓ Python, modern AI tools, and model development

WHAT YOU CAN DO

Build AI solutions, analyze unstructured data, and create intelligent systems that drive business value.

3. APPLY IN THE REAL WORLD

Put your skills to work on real business challenges.

Experiential Learning Options

PRACTICUM:
Company-sponsored projects with leading organizations

CAPSTONE:
Faculty-sponsored projects solving real business problems

Partner Organizations Include:



WHAT YOU CAN DO

Solve complex business problems, deliver AI-powered solutions, and gain experience that employers value.

4. CAREER OUTCOMES

Step into high-demand roles shaping the future.

Example Roles

AI & MACHINE LEARNING:
AI Analyst, ML Engineer

GENERATIVE AI & LLM:
Generative AI Specialist, AI Solutions Analyst, Prompt Engineer

PRODUCT & STRATEGY:
AI Strategy Analyst, AI Product Analyst, Analytics Consultant

MORE TECHNICAL ROLES:
AI Engineer, Business Intelligence Analyst, ML Engineer, Risk Analytics

WHAT YOU CAN DO

Launch or advance your career in AI and analytics across industries.

Customize Your Path

Choose AI-focused electives and experiential learning options that align with your interests and career goals.

Explore Business Analytics Careers



Santa Clara
Leavey School of Business