

# CHIEF DATA AND AI OFFICER CERTIFICATE PROGRAM

The success of a modern enterprise is increasingly dependent on its ability to maximize value from data and manage large, diverse, and rapidly changing data. Most executives admit that their organizations mismanage their information assets, leading to missed business opportunities and undue expense. To establish a data-driven culture change in an organization, and to harness the enormous benefits provided by emerging AI technologies in a responsible manner, management needs to engage with stakeholders across the enterprise to secure buy-in and ongoing support in treating data as an asset — not data as a byproduct. In this new data-driven world, organizations need to rely on skilled professionals who can harness the power of data and AI to drive innovation, make informed decisions, and create sustainable competitive advantages.



In today's rapidly evolving digital landscape, organizations worldwide are recognizing the pivotal role of data and artificial intelligence in driving strategic decision-making and sustainable growth. This new, innovative program, built upon the successful program for data leaders launched in 2021, combines theoretical foundations with hands-on experience, providing participants with practical skills that can be immediately applied in their organizations. Whether you are an aspiring chief data officer, AI strategist, or data scientist, this program will empower you to navigate the complexities of data and AI leadership with confidence.

The 18-module CDAIO Certificate Program will cover key areas—data and AI engineering, data science, decision making, emerging technology, change management, CDAIO operations, generative AI, responsible governance, and communication/influencing/leadership skills—to help data and AI executives build important analytical and decision-making capabilities to better support the strategic mission of their organizations.

## Program Highlights:

- Cutting-edge Curriculum:** Delve into a dynamic curriculum curated by industry experts, covering essential topics such as data governance, AI strategy development, ethical AI implementation, and leveraging data for competitive advantage.
- Practical Insights:** Gain practical insights from real-world case studies, interactive simulations, and hands-on exercises that bridge theory with application, preparing you to navigate complex challenges with confidence.
- Expert Instruction:** Learn from seasoned professionals and thought leaders at the forefront of the data and AI revolution, who bring a wealth of experience and expertise to the virtual classroom.
- Peer Networking:** Engage in vibrant discussions and collaborative learning experiences with a diverse cohort of peers from around the globe, fostering valuable connections and insights that extend beyond the program.

The seven-month program will be delivered via a hybrid format, combining synchronous distance learning to meet the needs of busy professionals with two on campus networking sessions to allow participants to develop a tight-knit cohort of their peers. Upon successful completion of the Chief Data and AI Officer Certificate Program, participants will emerge as strategic leaders equipped to drive organizational success through data-driven decision-making, innovation, and sustainable growth.



## PROGRAM MODULES

1. Enterprise Data Management (EDM) Foundations
2. Enterprise Data Strategy and Governance
3. Data and Analytics Maturity: From Foundations to Leading-Edge Practices
4. Data Engineering: Infrastructure and Technology
5. Modern Analytics for Business Intelligence
6. Data Ops
7. Data Monetization: The Practice of Infonomics
8. Developing Data Products and the Business of Data
9. Applied Data Science and Machine Learning: Managing Projects
10. AI Foundations and Applications (Demystifying AI)
11. AI Strategy (Value Creation) and Governance
12. Structuring and Operating the CDAIO Organization
13. Building the AI Factory - Developing Scalable AI Systems
14. Deploying and Monitoring AI Systems (ML/AI Ops)
15. Responsible AI Governance - Policy and Implementation
16. Generative AI and LLM Application
17. Data and AI Cybersecurity and Risk Management + Data Privacy
18. CDAIO Leadership and Communication Best Practices



For module descriptions, please visit <https://www.heinz.cmu.edu/cdaio>

## PRACTICUM

The CDAIO Practicum gives students the opportunity to demonstrate their knowledge, skills, and abilities as a CDAIO by working in teams to develop an enterprise data and AI strategy roadmap for a project organization and deliver a formal presentation to an executive suite.

- This unique capstone activity provides student teams a mechanism to demonstrate their knowledge, skills, and abilities in enterprise data management.
- In order to be successful, teams need to demonstrate command of the material through focusing on application of the methods, tools, and techniques taught in the modules and throughout the program.
- Practicum projects are designed for small teams of students to work, along with an experienced CDAIO coach, to architect an enterprise data strategy roadmap for a project company.
- Teams must also make an executive presentation to a simulated “C-suite”, thus communicating to their peers (and board) of the project company the benefits of the new enterprise data strategy roadmap to gain their acceptance.
- The CDAIO Program committee assembles teams to ensure that they consist of individuals from different industries/backgrounds to provide a unique learning experience for each student.

## ABOUT HEINZ COLLEGE

The Heinz College of Information Systems and Public Policy is home to two internationally recognized graduate-level institutions at Carnegie Mellon University: the School of Information Systems and Management and the School of Public Policy and Management. This unique colocation combined with its expertise in analytics set Heinz College apart in the areas of cybersecurity, healthcare, the future of work, smart cities, and arts & entertainment.

The Heinz College is #1 in Cybersecurity and Analytics and has been #1 in Information and Technology Management since 2001.



## PROGRAM REQUIREMENTS

What are the steps to earning the CDAIO Program Certificate?

- 1. Candidate Acceptance:** Each applicant must have sufficient practical experience (seven years) with increasing responsibility in a managerial capacity. An undergraduate or advanced degree in a relevant field is preferred.
- 2. Participation:** Participants must complete all certificate modules and assignments and attend all coaching sessions.
- 3. Practicum Project:** During the CDAIO Practicum, students are required to demonstrate their knowledge, skills, and abilities as a CDAIO by working in teams to develop an enterprise data management roadmap and deliver a formal presentation to an executive suite.

**Receive Your Certificate! The CDAIO Program Certificate includes the following benefits:**

- Immediate entry into the Executive Advantage Program
- Path to a Master's Degree: Students who complete the CDAIO Program Certificate are eligible for a tuition discount scholarship equal to the total amount paid to complete the CDAIO Program
- Official CDAIO Program logo for display



## PROGRAM LOGISTICS

**Program Dates:**

For program dates, please visit <https://www.heinz.cmu.edu/cdaio>

**Program Fees:**

Full Rate: \$17,850

Discounted Rate: \$14,280

*Applies to CMU alumni, non-profit employees, CMU CyLab Partners, U.S. government employees, and veterans.*

**Application Deadline:**

For application deadline, please visit <https://www.heinz.cmu.edu/cdaio>

Please submit your application as soon as possible for consideration.

*If space remains in the cohort after the given deadline, we will continue to accept applications on a first-come, first-served basis.*

**To Apply:**

<https://hinz.cm/cdaio-apply>



**Heinz College Executive Education**

4800 Forbes Avenue

Pittsburgh, PA 15213

email: [heinzexeced@cmu.edu](mailto:heinzexeced@cmu.edu)

phone: 412-268-6730

[heinz.cmu.edu/cdaio](https://heinz.cmu.edu/cdaio)