EMPOWERING YOUNG WOMEN IN DATA SCIENCE AND AI

PROJECT IMPACT REPORT

Advancing Gender Equality and Digital Inclusion in Uzbekistan

Produced by the Digital Education Development Center

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Mr. Azamat Eshankulov

Director, Digital Education Development Center (DEDC)

The "**Empowering Young Women in Data Science and AI**" project embodies our strong commitment to *digital inclusion* as a cornerstone of *sustainable digital transformation*. In a rapidly evolving world where **Data Science and Artificial Intelligence** are among the most sought-after competencies, expanding access for young women is not only an investment in individual potential, but also in the digital future of our nation.

This initiative demonstrated that when women are provided with opportunity, mentorship, and confidence, they do more than acquire skills — they become drivers of change. Alongside technical knowledge, the program cultivated ambition, creativity, and a sense of purpose. It stands as a powerful example of how education and empowerment together can build a more *equitable, innovative, and future-ready digital society.*

Mr. Otabek Gaipov

Secretary-General of the National Commission
of the Republic of Uzbekistan for UNESCO

The project "Empowering Young Women in Data Science and AI", implemented under UNESCO's 2024–2025 Participation Programme, marks a significant milestone in advancing gender equality and digital inclusion in Uzbekistan. With UNESCO's financial support and the dedicated efforts of the Digital Education Development Center under the Ministry of Digital Technologies and IT Loyihalar LLC, seventy young women acquired practical, future-ready skills in data science and artificial intelligence — fields that define the digital economy of tomorrow.

Beyond technical training, this initiative empowered participants to challenge stereotypes and pursue leadership roles in technology. Its success — from attracting more than 500 applicants to showcasing participant projects on GitHub and engaging with global experts from NVIDIA and Meta — illustrates the transformative power of education driven by inclusion and innovation.

Moreover, UNESCO, in cooperation with the Ministry of Digital Technologies of Uzbekistan, is implementing the AI Readiness Assessment (RAM) Project to evaluate the country's preparedness to integrate artificial intelligence into public administration, science, and education.

The establishment of the UNESCO–Uzbekistan Beruniy Prize for Scientific Research on the Ethics of AI stands as a landmark initiative in promoting the ethical development and application of artificial intelligence.

We are proud that these collaborations have laid a lasting foundation for expanding gender-responsive digital education across Uzbekistan.

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EXECUTIVE SUMMARY

The "**Empowering Young Women in Data Science and AI**" initiative, implemented by the Digital Education Development Center (DEDC) in partnership with IT Loyihalar LLC and supported by UNESCO, successfully equipped 70 young women from local universities with essential digital competencies—enabling them to pursue academic, professional, and leadership opportunities in the evolving data and AI-driven economy.

Through a six-month, 100-hour structured training program, participants gained comprehensive theoretical and practical competencies in Data Science, Artificial Intelligence, and programming. The curriculum covered statistics and data analysis, Python programming (NumPy, Pandas), exploratory data analysis (EDA), mathematics for AI, machine learning, and AI concepts and applications, ensuring a well-rounded and market-relevant learning experience. Participants also developed GitHub portfolios showcasing their applied projects and enhancing their employability in the IT sector.

The project provided participants with international exposure through their participation in the **AI Conference** during **ICT Week 2025**, which featured global experts from **NVIDIA** and **Meta**. This experience broadened their professional networks and inspired continued engagement in technology and innovation.

80
trained
(vs target of 70)

75
GitHub portfolios

100+
hours of training delivered

94
Retention rate

KEY ACHIEVEMENTS

Applications received

640+

Enrolled (70 planned)

80

Regions represented

14

Graduates

75

Training hours

100+

Mentors

3

Cohorts

4

International Conference attended:
ICT Week 2025: International AI Conference

1

Instagram posts on DEDC's official page
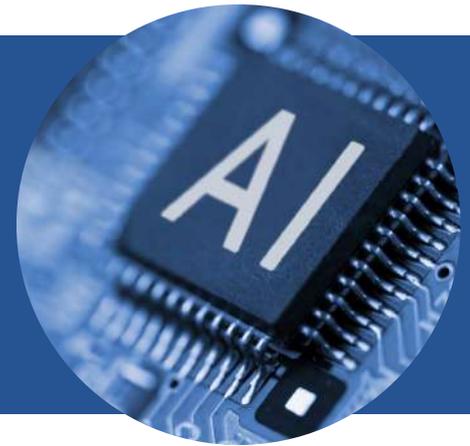
Telegram posts on DEDC's official channel

Official Telegram Channel of the project

PROGRAM OVERVIEW

Data Science and Artificial Intelligence Fundamentals

Total 100 hours

Eligibility Criteria

- Female students aged 18–25 enrolled in bachelor's or master's programs at local universities

- Strong background in mathematics, computer literacy, and logical thinking

- Basic knowledge of Python

- Clear motivation to pursue a career in Data Science and AI

- Successful completion of a two-stage selection process:
  - Online application
  - Online coding test and interview with the DEDC Selection Committee

- Availability to attend three online sessions per week for six months

- Commitment to develop and publish a final project on GitHub

Phase 1 – Technical Training (100 Hours)

- Core courses included:
  - Practical Statistics
  - SQL for Data Science
  - Python Crash Course
  - Exploratory Data Analysis
  - Essential Mathematics
  - Machine Learning
  - Introduction to Artificial Intelligence

Phase 2 – Skills Workshops (5 Hours)

- Introduction to GitHub Creation of GitHub Portfolio

Phase 3 – Professional Exposure

- Attendance at the AI Conference (ICT Week 2025)
- Interaction with global experts from NVIDIA and Meta
- Networking and mentorship opportunities for continued learning

IMPACT METRICS

Key quantitative indicators for the 2025 cycle:

94%

program completion among 80 enrolled participants

100%

of graduates completed Portfolio projects

90%

expressed increased confidence in technical problem-solving

40%

reported improved employment opportunities post-training

Field of Study	Number of Participants: 80 in total
Information Systems and Technology	55
Economics and Business	15
ICT and Professional traininig	5
Other	5

REGIONAL PARTICIPATION AND PARTICIPANT PROFILE

80

participants from **14** regions

5 participant

4 participants

7 participants

13 participants

3 participants

9 participants

2 participants

9 participants

9 participants

4 participants

4 participants

10 participants

1 participant

	Minimum	Maximum
Age	19 years	25 years
Education	Bachelor's 2nd year	Master's 2nd year

TESTIMONIALS

Nabiyeva Sevarakhon

3rd-Year Bachelor's Student
Fergana State Technical University,
Earth-Resistant Construction Program

"Joining the 'Empowering Young Women in Data Science and AI' program became a turning point in my studies. I already had some knowledge of Python, but this was the first time I learned how to apply it meaningfully within my field of structural engineering.

Working with real seismic data and visualizing patterns helped me see how digital tools can strengthen building safety and urban resilience. It was inspiring to realize that technology could directly enhance the impact of my profession.

The program also gave me something deeper - confidence. I created my first portfolio project, explored AI-driven engineering approaches, and discovered new directions for my future work.

I'm sincerely grateful to this initiative and its mentors for opening the path forward and showing that women can lead innovation with purpose and skill."

TESTIMONIALS

Alasheva Sabina

4th-year student
Tashkent International University of Chemistry,
International Economic Relations Program

"Before joining the "Empowering Young Women in Data Science and AI" program, I was already familiar with Python, but I had never applied it beyond simple exercises. My studies focused mainly on economic theories, and I couldn't imagine how coding could connect to my field until this program changed everything.

With the guidance of our mentors, I learned to work with real datasets, analyze trends, and visualize complex data. Building a predictive model for economic indicators became a breakthrough moment, helping me see how AI can transform international economics and decision-making.

Now I'm collaborating with a small team on a practical project that applies these methods to real business challenges. I'm deeply grateful to this program and everyone who made it possible. It didn't just expand my skills it opened doors to a future I hadn't imagined and strengthened my belief that women in Uzbekistan can lead the next wave of innovation."

Celebrating the Graduation of Future Female Tech Leaders

The **"Empowering Young Women in Data Science and AI"** project—supported by UNESCO and implemented in partnership with IT Loyihalar LLC—concluded with a successful graduation ceremony celebrating the achievements of **75 young women** who completed the intensive training program.

Over **6 months**, participants gained foundational and applied skills in **Data Science, Artificial Intelligence**, **big data processing, data visualization, GitHub** collaboration, and real-world problem-solving. Beyond technical competencies, the project strengthened their **confidence to pursue careers in technology** and take their first steps toward professional growth.

This milestone reflects our ongoing commitment to empowering girls and young women with future-ready skills and expanding their access to opportunities in the digital economy.

🤝 We extend our sincere gratitude to all mentors, donor and partner organization, and our dedicated team for their invaluable support throughout the project.

We remain committed to creating even more opportunities for young women to enter the world of technology.