


School of Computing and Data Sciences



**AMERICAN
UNIVERSITY
OF BEIRUT**

An Aspirational Vision



Lebanon and the region are in dire need of solutions that are non-traditional, that cut across disciplines and sectors. Whether it is mitigating water scarcity, health disparities, human rights, or understanding the shifting dynamics of migration and labor, we need the kind of insight that computing and data science can provide.

Fadlo R. Khuri, AUB President

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School of
Computing and
Data Sciences

2

Artificial Intelligence (AI) is taking over the world. But AI is not just a tool that we can use; it is a mirror that reflects who we are and a window into who we might become.

At the School of Computing and Data Sciences at the American University of Beirut, we are taking a principled and forward-looking stance on AI that recognizes its technical depth and breadth, its social and economic impact, and its philosophical magnitude.

We plan to cultivate a generation of thinkers, designers, and builders who are not just AI-literate but wise AI-leaders. The school's academic programs will cultivate expertise – from foundations to applications – in statistical modeling, machine learning, data management, and systems design, enabling graduates to drive effective and ethical discoveries and innovations at the service of medicine, earth sciences, industrial automation, business analytics, Arabic natural language processing, music, and the arts – in addition to pedagogy in the classroom, patient care, and institutional effectiveness.

Students at the School of Computing and Data Sciences will learn to ask deep and impactful questions, to model the world with courage and humility, and to imagine and shape futures where technology is not an escape from complexity, but a deep engagement with it.

AUB's location – at the fault line of economics, culture, politics, and ecology – and our unparalleled commitment to the region make us a uniquely fertile ground to lead in asking the hard, critical, and impactful questions that will trouble most of humanity away from the tech centers.

A New School for a Data-Driven 21st Century

3



We intend to amass the expertise, the capabilities, the computing talent, as well as researchers in a variety of fields to deliver a new way for artificial intelligence to prosper, and to deliver prosperity for us here in the region.

Abdo G. Kadifa, AUB Board of Trustees Chair

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4

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In June 2024, the Board of Trustees of the American University of Beirut voted to authorize the establishment of a School of Computing and Data Sciences, the first school of its size and strategic impact to be established at AUB in 70 years.

In doing so, the board responded to the necessity to maintain and advance the university's excellence in teaching and learning, research and innovation, medical care, and institutional effectiveness – and its historic role in the region as a place that upholds freedom of inquiry and thought at the service of knowledge production and human advancement.

AUB trustees, from their respective vantage points as leaders in the academic and business worlds, saw the opportunity to further AUB's mission to transform disciplines, sectors, and societies by leveraging the university's legacy and its unique status as the premier higher education institution in the region and beyond to addressing scientific, environmental, and societal challenges – especially those shaping the Mediterranean and the Global South.

Foundational Pillars

5

01. Academic degree programs in data and computational sciences

From literacy modules and academic minors to undergraduate and graduate degree programs, professional and research-oriented, targeting over 450 active degree-seeking students within a period of five years. The school will feature a flagship undergraduate BS program in data science, which will build on the university's longstanding cross-faculty engagement in the field, as it carves a distinctive identity. The program will accompany global revolutionary disruptions in form, content, and applications, and will root students in lasting foundations while equipping them with the skills needed to navigate transformations in academia and the workplace. This will be complemented and further extended into MS and PhD programs in computational and data sciences with core offerings and multi-disciplinary tracks to guide students through their journeys to the mastery of theory and applications and prepare them for advanced careers, locally and globally, in academia and industry.

02. World-class inter-disciplinary faculty body

The School of Computing and Data Sciences will comprise more than 25 core faculty members, including 18 new faculty lines, as well as several dual appointments and affiliates from AUB's seven existing faculties. The school's faculty body will cover the full spectrum of expertise from theory and fundamentals to tools and applications across disciplines, involving scholars, educators, visionaries, and industry professionals.

03. AI Institute

A research and development (R&D) engine that will drive research projects across disciplines, attract external funding, create start-ups, shape policy and practice, provide venues for capacity building, and establish strategic partnerships. The AI Institute will invite, host, enable, collaborate, and incubate, then interface promising innovations with the funding of pertinent industries, to spawn off entrepreneurial ventures in collaboration with campus wide initiatives.

04. Data Makerspace (DMS)

Providing tools and services, from data digitization, harvesting, and curation to data processing, visualization, and regulation. DMS will offer a vibrant and uniquely adaptable learning environment where students and researchers have an opportunity to explore, design, tinker, collaborate, inquire, experiment, and invent around data at scale.

05. Research Computing Center (RCC)

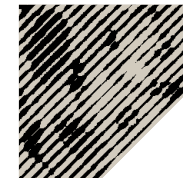
Providing high performance computing (HPC) infrastructure – CPUs and GPUs, both on-premises and in the cloud, along with robust security and governance. RCC will offer state-of-the-art services to faculty members and students by highly qualified expert support staff.

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School of Computing and Data Sciences

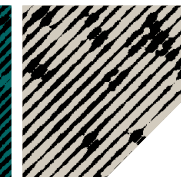
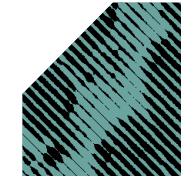
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Applications (health, Arabic, social, etc.)



Programming and algorithms

Machine learning and AI tools



450+
Degree Students

300
Undergrad

150
Master's

15
PhD

BS
Data Science

MS/PhD
Computational and Data Sciences

25+
Core Faculty Members

new



12

Professorial

6

Practice

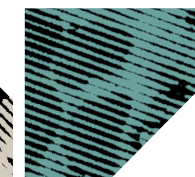
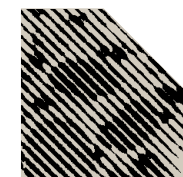
existing



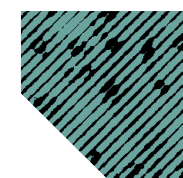
7+

Dual appointment

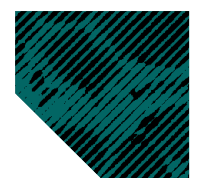
Ethics



Statistical methods



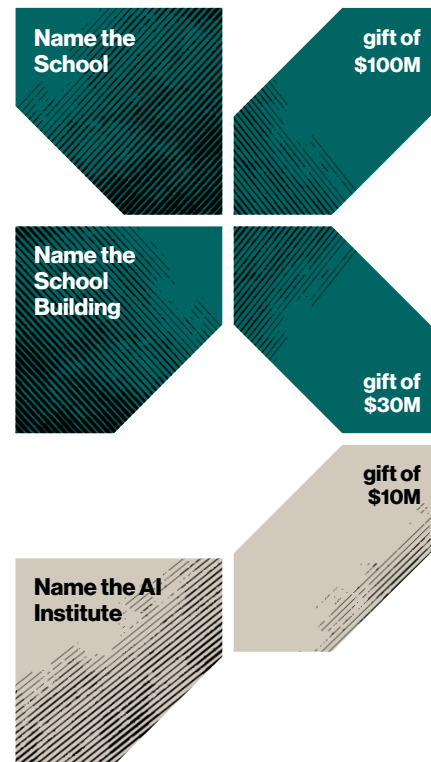
Data management, visualization, and policy



Partnership Opportunities

7

We are inviting visionary leaders, investors, companies, and foundations to partner with us to realize the transformative mission of the School of Computing and Data Sciences at AUB.



We have identified opportunities at all levels to support the establishment of the School of Computing and Data Sciences.

The opportunities span naming the school, naming the Computing and Data Sciences Building that will house the school on the AUB campus, as well as naming institutes, research and innovation labs, and endowed professorial chairs in emerging areas such as Arabic natural language processing, computational environmental sciences, health informatics and biomedical innovation, ethics and privacy, among others.

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School of Computing and Data Sciences

8

Donations to establish endowed funds would be structured according to the donor's interests and AUB's priorities. Significant upgrades to our current computing infrastructure are an imperative. Expanding the available computing resources would allow researchers in these domains to be more productive by alleviating the current computational resource bottleneck. Moreover, centralizing these resources in a shared system with clear governance and priorities would allow better utilization of the resources.

As with other AUB endowed funds, a donation to name and endow the school, the building, the AI Institute, a professorial chair, a research fund, a fellowship fund, a lectureship series, and other opportunities, would be invested with the university's asset pool. Based on the university's policy that it will spend annually around 4 percent of the moving average market value of its portfolio over 20 quarters, a \$10 million fund, for example, would be expected to generate around \$400,000 per year. We expect that the funding that is invested (e.g. \$10 million) will earn more than 4 percent a year and so the size of the market value of the endowed fund should grow over time, thus ensuring that additional money will be available to support the school in the future.



The American University of Beirut

9

Founded in 1866, the American University of Beirut bases its educational philosophy, standards, and practices on the American liberal arts model of higher education.

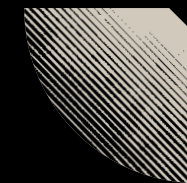
Its mission is to provide excellence in education, to participate in the advancement of knowledge through research, and to serve the peoples of the Middle East and beyond.

The university believes deeply in and encourages freedom of thought and expression and seeks to foster tolerance and respect for diversity and dialogue. It aims to graduate students who are committed to creative and critical thinking, life-long learning, personal integrity, civic responsibility, and leadership. It aspires to be a unique global institution – one that prepares ethical leaders for just, peaceful, resilient, and relevant societies.

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Where free minds flourish



AUB is chartered in the State of New York and is governed by a private and autonomous Board of Trustees. It is an accredited institution by the Middle States Commission on Higher Education (MSCHE) and is classified by the US Internal Revenue Service as a 501(c)(3) non-profit organization.





scds.aub.edu.lb

**American University of Beirut
PO Box 11-0236, Riad El Solh
Beirut 1107 2020, Lebanon**

**American University of Beirut – Mediterraneo
51 Apostolou Pavlou Avenue
8046 Pafos, Cyprus**

**The Debs Center – New York Office
3 Dag Hammarskjold Plaza, 8th floor
New York, NY 10017-2303, USA**

scds@aub.edu.lb