

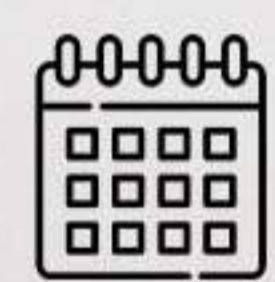


भारतीय प्रौद्योगिकी संस्थान दिल्ली
Indian Institute of Technology Delhi

Batch
03

Executive Programme in
**Healthcare
Entrepreneurship and
Management**

Programme offered by CEP, IIT Delhi



5 Months



Live Online

In an era marked by unprecedented change, the landscape of health and well-being has come under heightened scrutiny. The healthcare sector has emerged as a focal point for innovation, witnessing a surge in advancements ranging from sophisticated medical applications and telemedicine technologies to the growing public enthusiasm for smart wearables and cutting-edge medical devices. This dynamic environment presents a unique and unparalleled opportunity for businesses and start-ups to make their mark in this burgeoning market.

Embrace a new paradigm of growth in the healthcare industry with the Executive Programme in Healthcare Entrepreneurship and Management, meticulously crafted by CEP, IIT Delhi. This programme is designed for both graduates and seasoned professionals seeking to transition into entrepreneurial roles within the healthcare sector.

Drawing value from the programme's learner-centric curriculum, which encompasses the entire spectrum of healthcare innovation—including conception, design, prototyping, testing, customer discovery, sales and marketing, commercialization, and management of pioneering healthcare products and services—join us to unlock your potential and lead the future of healthcare innovation.



भारतीय प्रौद्योगिकी संस्थान दिल्ली
Indian Institute of Technology Delhi



There will be discussion with IIT Delhi's faculty, doctors from AIIMS, and industry experts on:

- ▶ A wide range of healthcare issues, from mental illnesses to foot pain, and appropriate product and service-related solutions will be developed.
- ▶ Key design concepts will be taught for B2C, B2B products, and hands-on experience will be provided on customer discovery, iterative design optimization, and design of minimum viable product (MVP).
- ▶ State-of-the-art prototype development processes, tools, and testing methods will be discussed, along with the role of AI/ML, strategies for effective product branding, pricing, sales, and go-to-market.
- ▶ In-depth discussions on commercialization and management concepts, particularly those related to business model development, funding, intellectual property, regulations, and scale-up.
- ▶ The majority of experiential and hands-on learning content will be taught by top faculties with engineering, clinical, industry, and start-up backgrounds. The learnings will be valuable for healthcare companies as well as for graduates willing to start up in the healthcare space or get into the role of a biomedical engineer or entrepreneur.
- ▶ Additionally, doctors, engineers, researchers, and medical professionals in the field of biotechnology in a company or institute, will gain valuable insights into lab-to-market transfer of healthcare products.

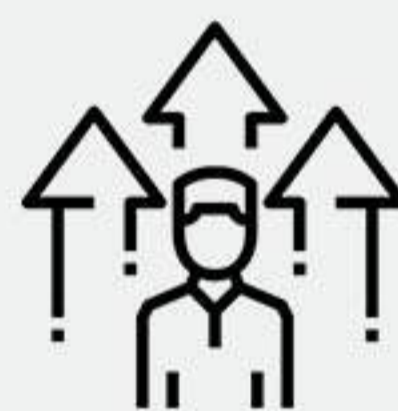
Programme Highlights

01



Certificate from prestigious CEP, IIT Delhi

02



Top IIT Delhi faculties and industry experts

03



Holistic curriculum covering concepts & applications

04



Projects, Tutorials and Hands-on experience

05



Rich peer group learning and networking

Key Learning Outcomes

- ▶ Innovate new healthcare products and services from a value-driven and a customer-centric approach.
- ▶ Gain successful process-oriented design thinking capabilities.
- ▶ Be an expert in healthcare product prototyping and testing.
- ▶ Develop a strong foundation in branding, pricing, sales and go-to-market strategies.
- ▶ Learn key commercialization concepts such as business model development, funding, intellectual property, regulations.
- ▶ Build a strong foundation for biomed/biotech engineering and management roles.
- ▶ Launch successful healthcare start-ups.

Programme Content

Module 1. Conception

- ◆ Basics – What is entrepreneurship? What is a product? Difference between product and service?
- ◆ Healthcare problems and unmet need– Current health-related challenges-pre and post pandemic, existing solutions, product, and service requirements
- ◆ Empathy, Personas, User Stories – stepping into consumers' shoes and understanding medical issues
- ◆ Identifying New Opportunities in Healthcare Innovation using Data – market gap
- ◆ Understanding healthcare policies and strategies
- ◆ Market Research for Healthcare Product or Service Development – How to conduct market research?
- ◆ Idea Generation & Need Analysis – Source, evaluate ideas
- ◆ Conception of Healthcare Products: The Doctor's Perspective
- ◆ Concept testing using Surveys-Customer Discovery: template, evaluate the value proposition
- ◆ Design Thinking for B2C, B2B Products and Services
- ◆ Competition Analysis and Product Market Fit

Module 2. Design

- ◆ Product Design Process - 7 Stages
- ◆ Healthcare Product Specifications and Feature-I
- ◆ Healthcare Product Specifications and Features-II (Contd.)
- ◆ Visual Design Elements – Branding elements
- ◆ User experience (UX) and User Interface (UI) design
- ◆ Introduction to Medical App Development
- ◆ Quality Engineering and Iterative design optimization. Design for Manufacturing
- ◆ Computational Tools used in Design and Analysis of Healthcare Products

Module 3. Prototyping

- ◆ Minimum Viable Products (MVP)
- ◆ Types of MVP
- ◆ Prototype development for Physical and Digital Healthcare Products, and Services
- ◆ Wireframing
- ◆ Manufacturing Techniques – Additive (3D Printing), Subtractive, biochemical, multi-scale
- ◆ Material Selection for Healthcare Product Prototyping
- ◆ Role of Robotics and Automation in Prototyping
- ◆ Prototype Functionalization using Electronics and Instrumentation, Role of AI/ML
- ◆ Prototype-to-Product and Mass Production
- ◆ Medical App Prototyping- Hands-on on Figma

Module 4. Testing

- ◆ Usability Testing
- ◆ Simulated Test Marketing
- ◆ Beta Testing
- ◆ Material Testing and Characterization
- ◆ Role of AI/ML in Healthcare Product Development and Testing
- ◆ Ethics, Testing on Animal Models and Human Subjects
- ◆ Clinical Testing Methods
- ◆ Regulations and Standards: ISO

Module 5. Sales and Marketing

- ◆ Branding, Brand Awareness, Consumer Brand Knowledge
- ◆ Human Behaviour Management
- ◆ Product-line Decisions (extension, reduction), Product Category expansion
- ◆ Pricing Model and Strategy
- ◆ Segmentation | Target | Positioning
- ◆ Sales Forecasting
- ◆ Distribution Channels
- ◆ Lead Generation-Role of Contacts and Social Media
- ◆ Customer Acquisition and Retention

Module 6. Commercialization

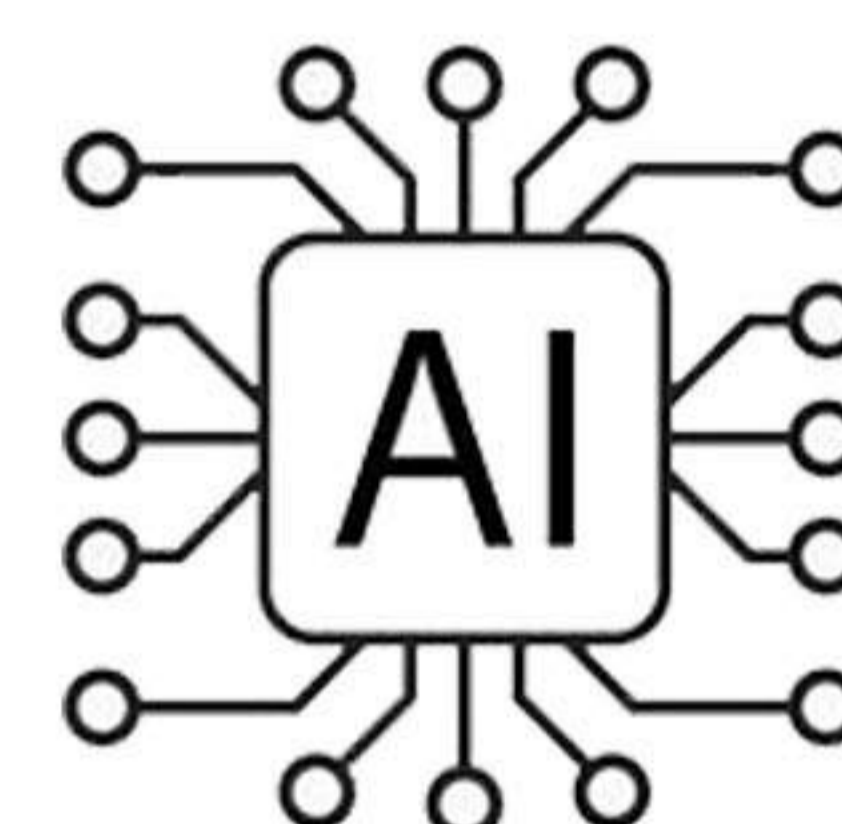
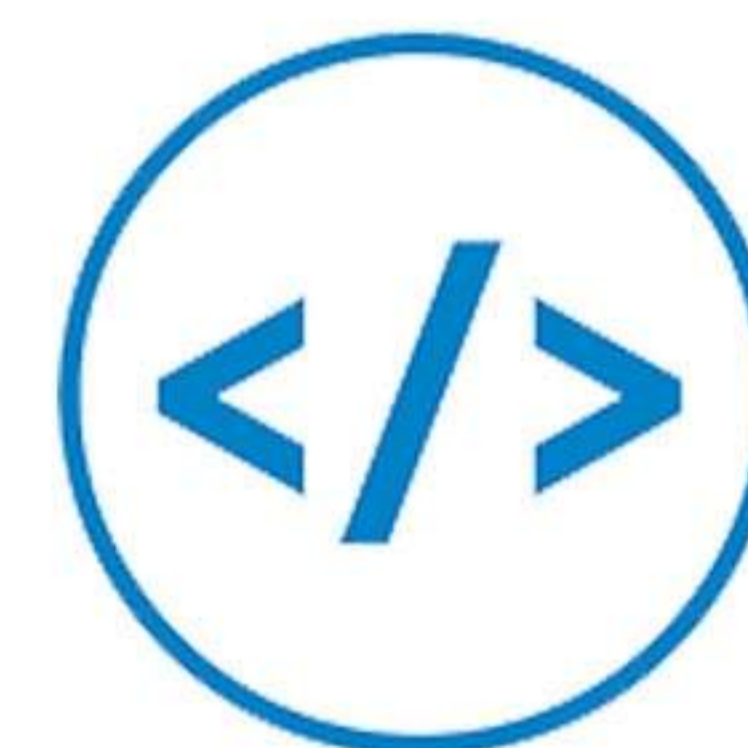
- ◆ Introduction to Business Model Canvas
- ◆ Funding Requirement and Avenues
- ◆ Team Building and Collaborations
- ◆ Intellectual Property and Trademarks
- ◆ Ethical and Legal Implications in Healthcare Industry
- ◆ Market Competition and Creating Barriers to Entry
- ◆ Deployment and Distribution Strategy
- ◆ Launching of Start-up: Rules and Steps
- ◆ Scale-up Model and Sustainable Growth Plan
- ◆ Healthcare Quality Management

Project(s)

Bootstrapped development of 1 Product per team (5-10 students), with a tested deployment, marketing, and go-to-market commercialization plan. It will include expertise from local hospitals such as AIIMS.

Note: This is an indicative list of modules, projects, and tutorials, tools and is subject to change as per IIT Delhi's discretion.

Gain exposure to the applications of below tools and libraries in healthcare space:



Pedagogy

The teaching will focus on learning important concepts from scratch through discussions on real life examples. The topics will then be applied by the students as a part of the course and project assignments. The project, which will run throughout the course, will involve hands-on training on the topics taught and enable the development of a strong technical and entrepreneurial mindset. Dynamic two-way feedbacks will ensure effective mentoring and student learning.



| | |
|----------------------------------|--|
| Duration | <ul style="list-style-type: none"> • 5 Months |
| Delivery | <ul style="list-style-type: none"> • Synchronous, Live Online Mode • 80 Hours Live Online Lectures • 40 Hours of Project |
| Schedule | <ul style="list-style-type: none"> • Lectures: 1 day weekend class (Saturday) 10:00 AM to 12:00 PM, 12:30 PM to 2:30 PM • Project: 1 day weekend class (Biweekly Sunday) 10:00 AM to 12:00 PM, 12:30 PM to 2:30 PM • Session Timings: 10:00 AM to 12:00 PM, 12:30 PM to 2:30 PM • Application Closure Date: 28th February 2025 • Technical Orientation: 7th March 2025 • Academic Orientation: 8th March 2025 |
| Eligibility | <ul style="list-style-type: none"> • A bachelor's degree • Prior work experience or a certificate of completion of an internship or project is desirable |
| Screening & Selection | <ul style="list-style-type: none"> • Applications will be reviewed based on the eligibility and subsequent shortlisting process as laid down by the Programme Coordinator |
| Assessment Criteria | <ul style="list-style-type: none"> • 40% Assignments • 50% Projects • 10% Attendance • Candidates need to secure a minimum of 60% overall to be eligible for the Successful completion certificate |
| Attendance | <ul style="list-style-type: none"> • Participants with Grades > 60% and Attendance > 70% will get completion certificates. Rest of the participants with Grades < 60% and Attendance > 50% will get participation certificates. No certificates will be issued for participants with below 50% attendance |

Application Requirements

Education Document

- Consolidated graduation mark-sheet / Passing Certificate

Experience Document (If applicable)

- For Previous Organization(s): Relieving letters
- For Current Organization: Current Salary Slip or Bonafide Certificate from the HR department on company letterhead.

ID Proof

- Any Government-issued photo ID like PAN Card/ Driving License/ Passport, etc.

Programme Fee Structure & Instalment Pattern

| Particulars | Amount |
|-------------------------------------|-----------------------------|
| Application Fee (non-refundable) | INR 1,000/- +GST |
| Total Programme Fee | INR 1,20,000/- + GST |

| Instalment Pattern | | |
|--------------------|-------------------|--|
| Particulars | Instalment Amount | Payment Schedule |
| Instalment 1 | INR 60,000 +GST | Within 3 days from the release of offer letter |
| Instalment 2 | INR 60,000 + GST | On or before 8 th March 2025 |

*Application Fee of INR 1,000/- + GST is non-refundable and will not be adjusted in the total programme fee.

*Payment of fees should be submitted in the IIT Delhi CEP account only, and the receipt will be issued by the IIT Delhi CEP account for your records.

*Loan Options is a service offered by Jaro Education and IIT Delhi is not responsible for the same.

Withdrawal & Refund from Programme:

- Candidates can withdraw within 15 days from the programme start date. A total of 80% of the total fee received will be refunded. However, the applicable tax amount paid will not be refunded on the paid amount.
- Candidates withdrawing after 15 days from the start of the programme session will not be eligible for any refund.
- If you wish to withdraw from the programme, you must email cepaccounts@admin.iitd.ac.in and crm.supportiitd@jaro.in, stating your intent to withdraw. The refund, if applicable, will be processed within 30 working days from the date of receiving the withdrawal request.



Programme Certification

- Participants with Grades > 60% and Attendance > 70% will get completion certificates. Rest of the participants with Grades < 60% and Attendance > 50% will get participation certificates. No certificates will be issued for participants with below 50% attendance.
- The organising department for this programme is the Centre for Biomedical Engineering.
- Only e-certificates will be issued by CEP, IIT Delhi, as per the sample below.



Programme Code:

  **Indian Institute of Technology Delhi** 

HAUZ KHAS, NEW DELHI- 110016

Department/Centre/School of

Continuing Education Programme

On

Title of the Programme

This is to certify that

Mr./Ms. **Name Of The Participant**

has successfully completed the online certificate programme on "Title of the Programme" held from to by the Indian Institute of Technology Delhi.

Prof. Programme Coordinator

Prof. Head of the Department

Prof. Head/Associate Head, QIP/CEP



An initiative under eVIDYA@IITD (ई-विद्या@IITD)



Programme Code:

  **Indian Institute of Technology Delhi** 

HAUZ KHAS, NEW DELHI- 110016

Department/Centre/School of

Continuing Education Programme

On

Title of the Programme

This is to certify that

Mr./Ms. **Name Of The Participant**

has participated in the online certificate programme on "Title of the Programme" held from to by the Indian Institute of Technology Delhi.

Prof. Programme Coordinator

Prof. Head of the Department

Prof. Head/Associate Head, QIP/CEP



An initiative under eVIDYA@IITD (ई-विद्या@IITD)



Dr. Arnab Chanda

Associate Professor at the Center for Biomedical Engineering, IIT Delhi

PhD, University of Alabama, USA

- ▶ A joint faculty at the Department of Biomedical Engineering, AIIMS, Delhi
- ▶ Founder of a startup company BIOFIT Technologies LLC, USA

Dr. Arnab Chanda is an Associate Professor at the Centre for Biomedical Engineering, IIT Delhi, and a joint faculty at the Department of Biomedical Engineering, AIIMS, Delhi. He is also the founder of a startup company BIOFIT Technologies LLC, USA. He has also worked as a postdoctoral researcher at the Department of Bioengineering, University of Pittsburgh, USA, and as a research scientist in LP Amina, China. Dr. Chanda is an expert in the fabrication and mechanical characterization of tissue mimics, and has previously developed artificial surrogates for human skin, muscles, brain, artery, and plantar fascia, and tested them in both lab and clinical settings. These experimental models have been used extensively for surgical training and to study a wide range of injury scenarios. To date, he has received young researcher awards from ASME and MHRD, and also holds 7 US Patents and several tech-transfers. Currently, Dr. Chanda heads the "Disease and Injury Mechanics Lab (DIMLI)", where his team is working on developing cutting-edge wearable technologies to mitigate foot-related disorders (i.e., diabetic ulceration, plantar fasciitis, slips, and falls) in India. They also aim to fabricate low-cost artificial organs for surgical training.



Dr. Biswarup Mukherjee

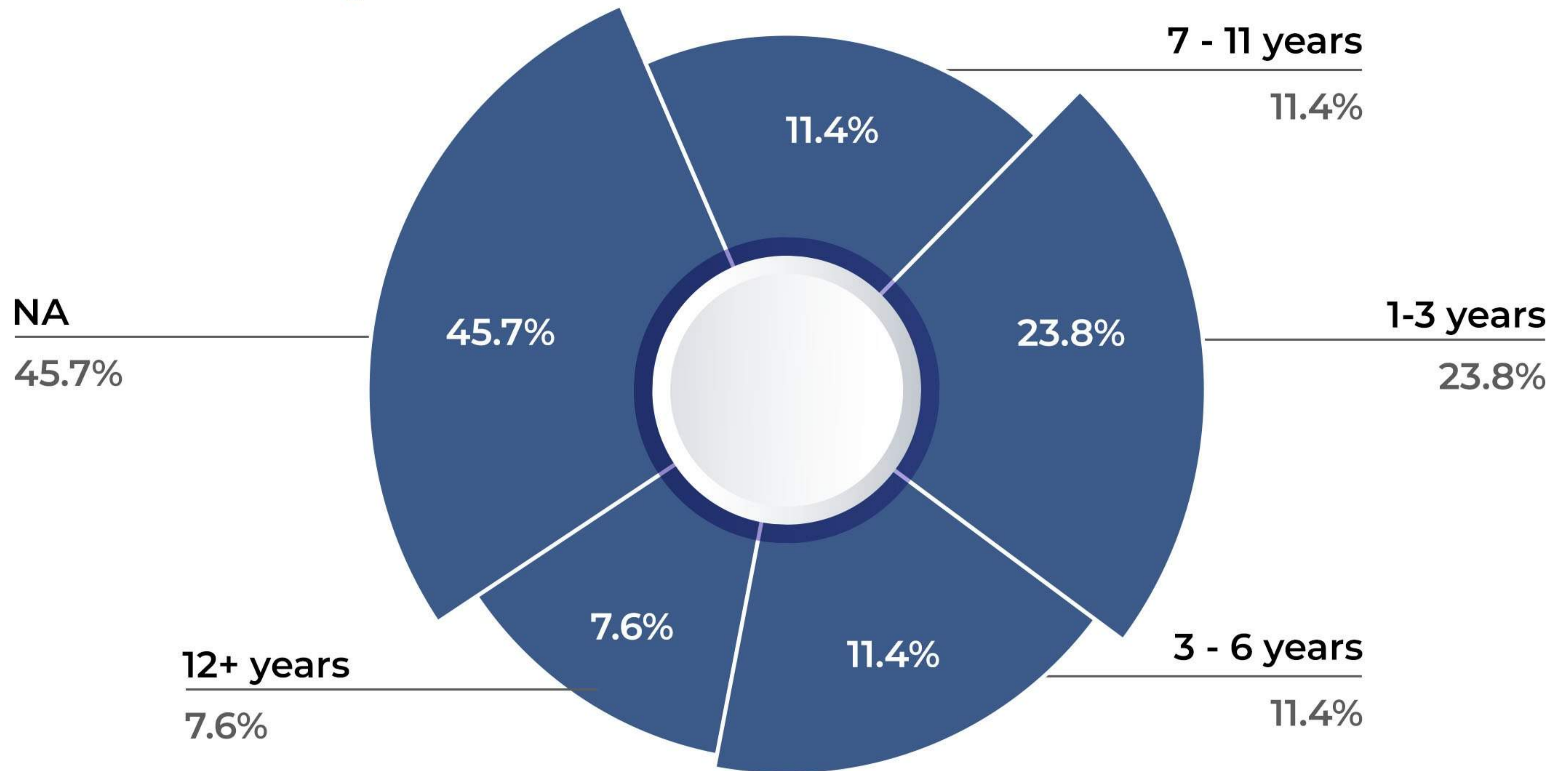
Assistant Professor at the Center for Biomedical Engineering, IIT Delhi

PhD, Indian Institute of Technology Madras (IITM)
Ex-postdoctoral research fellow at Harvard Medical School

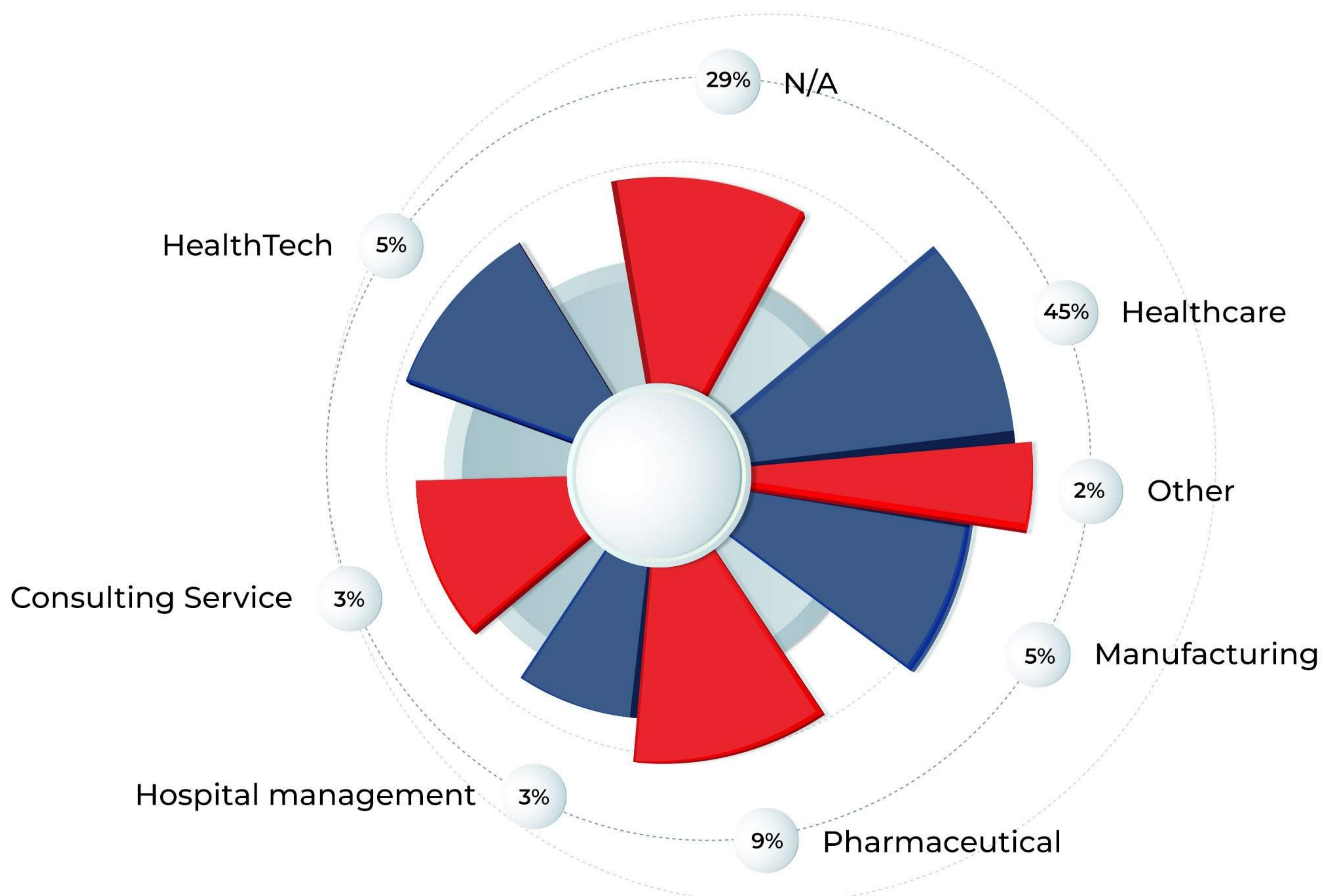
Dr. Biswarup Mukherjee is an Assistant Professor at the Center for Biomedical Engineering, IIT Delhi. His research effort is focused towards developing multi-modal platform technologies that provide the means to non-invasively monitor aspects of neuromuscular activity in real-time, particularly for rehabilitation applications. Development of biomimetic sensors to improve sensorimotor integration in individuals with motor disabilities. He is also interested in developing tools and devices for quantitative assessment of motor skills. He obtained PhD in Electrical Engineering from IIT Madras where he developed capacitive and magnetic sensing systems for medical training and simulation applications. He was a postdoctoral research fellow at Harvard Medical School where he developed novel medical training models for emergency medicine, ophthalmology and nursing. He was a Research Assistant Professor with the Department of Bioengineering at George Mason University. He was also an affiliate faculty at the Center for Adaptive Systems of Brain-Body Interactions at Mason. There he was involved in multiple federally funded projects to develop low-power ultrasound instrumentation and techniques for muscle-activity monitoring for prosthetic and rehabilitation applications.

Recent Batch Profiles

Work Experience



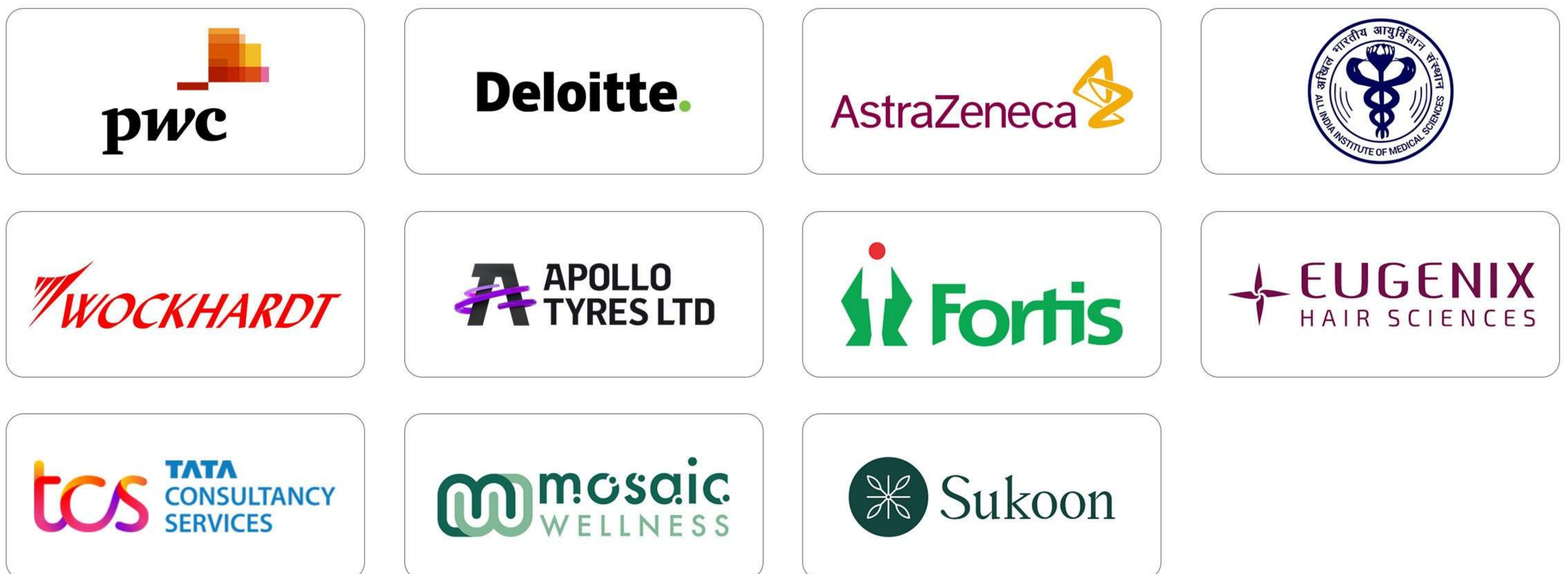
Industry Representation



Designation/Role of Previous Participants



Top Companies Our Batch Are Working At



Note:-

- All company names are trademarks or registered trademarks of their respective holders. Use of them does not imply any affiliation with or endorsement by them.
- This only indicates the organizations where participants were employed.
- The list is partial.



DR. HETVI SHAH

Founder's Office
TeachSpoon Edtech Pvt. Ltd.

“

With four years of experience in corporate healthcare and a background in dentistry, I recognized the need to formalize my business knowledge and enhance my strategic skills. The Executive Programme in Healthcare Entrepreneurship by IIT Delhi, facilitated by Jaro Education, provided an ideal platform for upskilling while continuing my corporate journey. IIT Delhi's faculty brought immense expertise, making the curriculum's combination of healthcare management and entrepreneurship highly relevant. Key highlights included project and pitch deck preparation, which I regularly use in my role, and analyzing healthcare business models for a deeper understanding of market dynamics. While Jaro Education's programme support was adequate, there's room for improvement in enhancing the interactive experience and alumni network.

”



as per NIRF India
Engineering Rankings
(2024)



as per NIRF India
Management Rankings
(2024)



as per QS World University
Rankings by Subject 2024;
Engineering & Technology

The Indian Institute of Technology Delhi (IIT Delhi) is one of the 5 initial IITs established for training, research and development in science, engineering and technology in India. Established as College of Engineering in 1961, the Institute was later declared as an Institution of National Importance under the "Institutes of Technology (Amendment) Act, 1963" and was renamed as "Indian Institute of Technology Delhi". It was then accorded the status of a Deemed University with powers to decide its own academic policy, to conduct its own examinations, and to award its own degrees.

Since its inception, over 48000 students have graduated from IIT Delhi in various disciplines, including Engineering, Physical Sciences, Management, Humanities and Social Sciences. Of these, nearly 5070 received PhD degrees. The rest obtained a Master's Degree in Engineering, Sciences and Business Administration. These alumni today work as scientists, technologists, business managers and entrepreneurs. There are several alumni who have moved away from their original disciplines and have taken to administrative services, active politics, or are with NGOs. In doing so, they have significantly contributed to the building of this nation and to industrialization around the world.

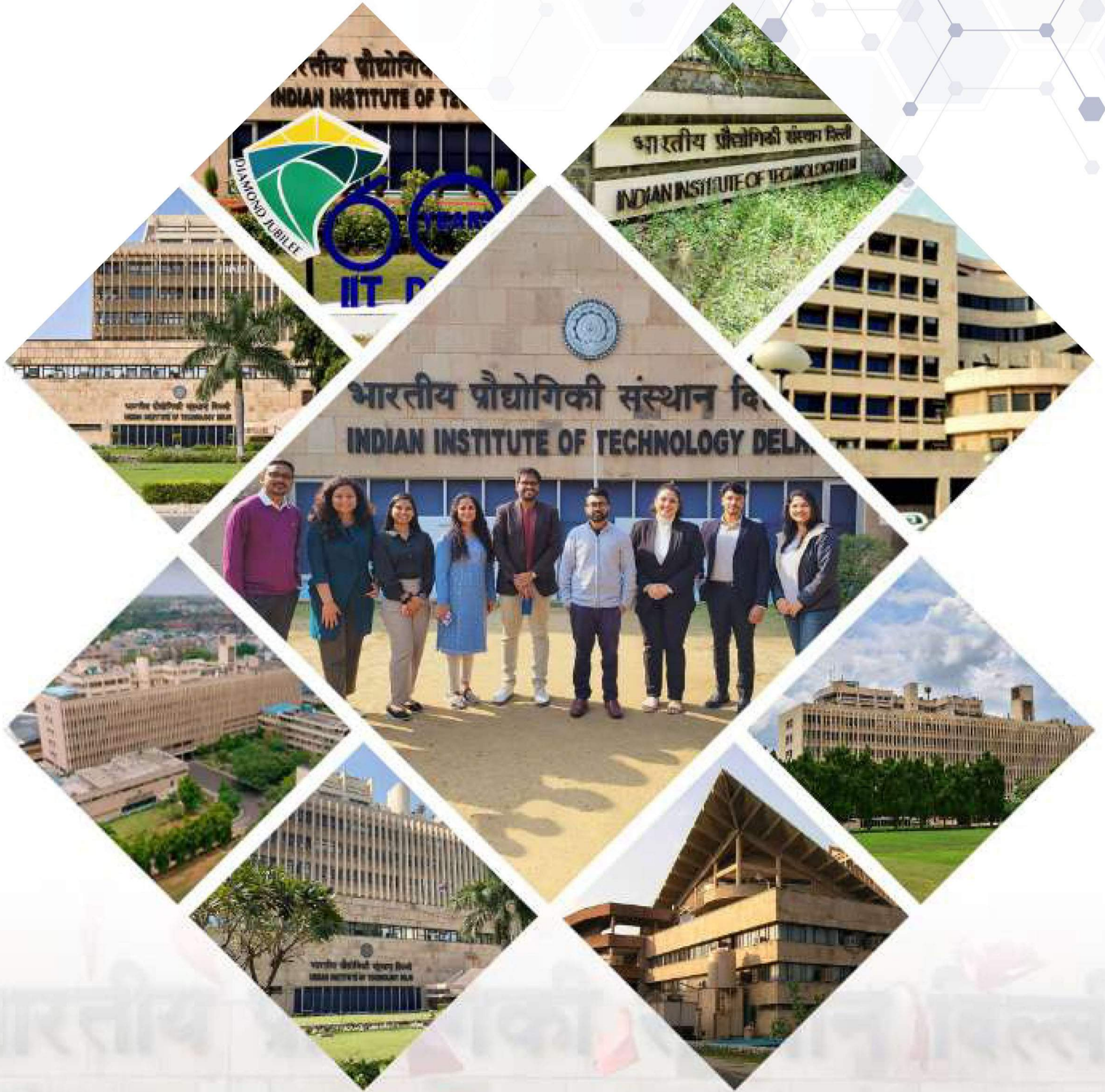


About Continuing Education Programme (CEP)

Executive education is a vital need for the companies to build a culture that promotes newer technologies and solutions and builds a workforce that stays abreast of the rapidly transforming needs to the technological, business and regulatory landscape. Committed to the cause of making quality education accessible to all, IIT Delhi has launched Online Certificate Programmes under eVIDYA@IITD (ई-विद्या@IITD): enabling Virtual & Interactive-learning for Driving Youth Advancement@IITD for Indian as well as international participants. These outreach programmes offered by the Indian Institute of Technology Delhi (IIT Delhi) are designed to cater to the training and development needs of various organisations, industries, society and individual participants at national and international level with a vision to empower thousands of young learners by imparting high-quality Online Certificate Programmes in cutting-edge areas for their career advancement in different domains of engineering, technology, science, humanities and management.



Glimpse of Our Previous Participants





REGISTER NOW!

Service provide by

jaro education

 **+91-8433740178**

 **priya.rathod@jaro.in**

**For any feedback, please write to
CEP IIT Delhi at
contactcep@admin.iitd.ac.in**

Online Certificate Programmes are offered by the Indian Institute of Technology Delhi under the aegis of Continuing Education Programme (CEP) so that the Institute can realise its vision of serving as a valuable resource for industry and society, and fulfil its mission to develop human potential to its fullest extent so that intellectually capable and imaginatively gifted leaders can emerge in a range of professions.