

WHO WE ARE

iSpark's parent company, TCM Ltd, boasts a distinguished history spanning 91 years. It was founded in 1943 by the esteemed scientist and Nobel laureate, Dr. Sir CV Raman. Based in Chennai, iSpark Learning Solutions is a transformative education services provider committed to equipping school students with essential 21st-century skills. These skills are crucial for navigating the challenges of a rapidly evolving digital landscape characterized by advancements in Robotics, AI, IoT, and Big Data. Our focus is on nurturing innovation, fostering creativity, enhancing problem-solving capabilities, and sharpening critical thinking skills—competencies imperative for success in today's technology-driven world. The establishment of our state-of-the-art Centre of Excellence (CoE) lab in your school, funded entirely by us, underscores our commitment to this mission. Our progressive, 100% hands-on curriculum is designed to empower the next generation, enabling students to become architects of their own futures, equipped with the knowledge and skills they need to thrive.

WE ARE DIFFERENT THAN THE REST

Our mission is to deliver an engaging, enriching, and experiential education to students of all ages. This is achieved through our distinctive learn-by-doing curriculum, which is in sync with the new National Education Policy 2020 (NEP2020), advocating for project-based and application-oriented experiential learning. The iSpark core team brings together over a century of combined industry expertise in areas such as R&D, Product Development, Robotics, Embedded Systems, Manufacturing, Industrial Automation, ICT, Tele-Education, Training Management, and Digital Learning strategies, all tailored for the knowledge-based economy. At iSpark, we are committed to harnessing the latest in educational technology to create accessible educational products and courses. Our goal is to make these resources affordable for the majority of India's 250+ million school-going students. This initiative is a step towards bridging the digital divide and democratizing the development of 21st-century skills, truly embodying the spirit of an inclusive educational revolution.

SCROLL DOWN TO KNOW US BETTER !

Vision

Our vision at iSpark Learning Solutions Pvt Ltd is to be a global leader in empowering students of all ages to master essential 21st century skills, fostering their holistic transformation into successful global citizens. We are dedicated to providing accessible and affordable educational courses and products, delivered through both online and blended learning platforms. Our commitment is to become the world's most cherished, esteemed, and reliable one-stop destination for skills development, enriching lives and shaping futures with our innovative and impactful educational solutions

Mission

Our mission is to revolutionize education by designing and delivering educational programs that focus on the essential 21st century skills. Our goal is to holistically transform school students, equipping them to thrive in a digital world driven by advancements in Robotics, AI, IoT, and Big Data. We are committed to Creating

indigenous courses and products designed to empower over 250 million school-going children in India, preparing them for a future that prioritizes skills over traditional academic scores or paper grades or degree certificates. Our aim to lead the way in redefining educational paradigms, ensuring every student is equipped with the skills and knowledge to succeed in this digital and AI era.

Team

We are a highly passionate team of educationists, technologists and professionals with a combined industry experience of more than one hundred man years. Using both online and blended teaching, we deliver a meaningful education to all school students and develop their 21st century skills that include innovation, creativity, problem solving, critical thinking, computational thinking, logical reasoning, collaboration, communication and so on. These skills are mandatory today in order to get jobs and survive in this knowledge-based economy. The co-founder and CEO is a roboticist himself with over 30 years of industry experience in Singapore Institute Manufacturing Technology (SIMTECH), the Singapore's national A* R&D facility, Nanyang Technological University (NTU, Asia's MIT), HCL, WRI, BHEL and so.

OUR EXPERTISE

Founder & Chairman

Joseph Varghese serves as the esteemed President of the Elenjikal Group of Companies and the Managing Director of TCM Ltd, a prominent chemical manufacturing enterprise in India with a rich history spanning over 80 years. TCM stands as one of the oldest companies listed on India's premier stock exchanges, with expansive operations across numerous locations in India and abroad. The company's prestigious lineage traces back to its founding by Nobel Laureate and renowned scientist, Dr. Sir C V Raman. In his recent endeavors, Varghese has turned his focus to emerging and rapidly growing industries, including Renewable Energy (particularly Solar), Healthcare, and Educational Technology. Under his skillful leadership and guidance, iSpark Learning Solutions is poised to emerge as a leader in skills-focussed STEM education and preparing the students globally for this digital and AI era.

Co-founder, CEO & MD

P H Mohanamurthy is a distinguished industry veteran with over three decades of experience across Robotics, Industrial Automation, Product Development, R&D, and STEM Education Management. A fervent advocate for quality education, he has been instrumental since 2000 in enhancing education systems to equip students with essential 21st century skills, making them employable and globally competitive. Driven by the vision of holistic student development, Mohanamurthy has been at the forefront of integrating Education 4.0 and progressing towards Education 5.0 in Indian schools. This approach aims at fostering innovation and entrepreneurship, preparing students for advanced societal roles. His work is inspired by Dr. A.P.J. Abdul Kalam, particularly in advancing interactive tele-education since 2010, to bridge educational divides using

the internet, thus working towards realizing a National Knowledge Grid. Mohanamurthy has co-founded and led several edtech companies in India and Singapore, including iScholar Education Services Pvt Ltd, Live Tutor Solutions Pvt Ltd, EdServ Softsystems Ltd, VBridge Knowledge Solutions Pvt Ltd and Infocomm Technologies and Education Pte Ltd (Singapore). These roles have seen him implement skill-based, career-focused educational programs. His career began in 1985 at BHEL, Trichy, as an R&D Engineer, where he specialized in industrial robotics and welding automation. His tenure extended to significant contributions at Singapore Institute of Manufacturing Technologies (SIMTECH) and Nanyang Technological University (NTU), including setting up NTU's first intelligent robotic lab under the multi-million dollar NTU-SIMTECH upstream R&D initiative. Mohanamurthy's commitment to education extended to designing role-based, vendor-neutral technology courses endorsed by the Infocomm Development Authority of Singapore. He also crafted an integrated, hands-on program using STEM-Robotics, Coding, IoT, AI and 3D printing to nurture future problem solvers, innovators, and entrepreneurs. Addressing the digital divide, he and his R& team developed the world's most affordable STEM-PC and STEM-Laptop and educational kits for STEM, IoT, AI, and Electronics, making essential education tools accessible to underprivileged students in India. His efforts aim to democratize skill-focused education and experiential learning, promoting equality in education across economic divides. Holding BE(EEE) and M.E (CSE) degrees from NIT, Tiruchirappalli, Mohanamurthy's vast body of R&D work and mentorship of hundreds of students both in India and abroad underscore his commitment to advancing educational and technological frontiers.

Senior Technical Engineer

Saravanan Krishnamoorthy is a highly motivated Engineer Technology Support professional with 8+ years of experience in providing technical support, installation, and troubleshooting of various systems. He possesses expertise in BMS, CCTV, fire alarms, and related infrastructure. Having graduated with a B.Tech (Information Technology) in 2009, Saravanan leverages his strong technical background to diagnose and solve complex issues, ensuring smooth operation and exceeding customer expectations. Throughout his career, Saravanan has demonstrated exceptional problem-solving, communication, and teamwork skills. He is proficient in Microsoft Office Suite and relevant software used in BMS and security systems. His dedication, work ethic, and eagerness to learn new technologies make him a valuable asset to any team.

Technical Support

Yogaraj works as a Technical Support person at iSpark Learning Solution. He completed his Bachelor of Computer Applications (BCA) in Cuddalore District. Previously, he held the position of Dying Assistant Manager at a Textile company. Yogaraj's journey reflects his transition from the textile industry to the tech sector, where he now applies his skills and expertise to support the technical needs of iSpark Learning Solution.

Studio Manager and Video Editor

Naveen Kumar is currently a Studio Manager and Video Editor at iSpark Learning Solution Pvt Ltd. He pursued his Bachelor of Computer Applications (BCA) and Film Editing at LOYOLA College in Chennai. In his earlier career, Naveen Kumar worked in various roles within the film and television industry, including as an Assistant Film Editor in Tamil movies, an Assistant Editor in Tamil serials, and as a LIVE show Anchor on a TV channel. He also gained experience in the TV Channel playout session. Naveen Kumar's diverse background in film and television has equipped him with the skills and expertise to contribute effectively to iSpark Learning Solution as a Studio Manager and Video Editor.

ISMART DEVELOPMENT TEAM

iSpark's R&D and Product Development Initiatives : Transforming Education with Innovation

At iSpark Learning Solutions, research and development (R&D) form the cornerstone of our commitment to revolutionizing education. With a steadfast focus on creating innovative, technology-driven solutions, our R&D and Product Development team works relentlessly to address the dynamic needs of 21st-century classrooms. We combine cutting-edge advancements in Artificial Intelligence, Robotics, and IoT to empower educators and engage students in unprecedented ways.

Bridging the Gap Between Technology and Education

Our R&D initiatives aim to seamlessly integrate emerging technologies into traditional learning environments, transforming schools into hubs of innovation. By focusing on hands-on, application-oriented learning, we develop solutions that cater to both teachers and students, fostering an ecosystem where education meets the real-world demands of Industry 4.0. From advanced robotics kits to interactive learning platforms, every product we develop is designed to make learning more immersive, practical, and engaging.

The Humanoid AI Teacher Robot: A Groundbreaking Innovation

Among our most remarkable achievements is the development of the Humanoid AI Teacher Robot. Designed to complement and assist human teachers, this revolutionary invention stands at the forefront of our R&D efforts. Built using a lifelike Indian female mannequin, the robot embodies the essence of a traditional Indian school teacher while harnessing the power of Artificial Intelligence to redefine classroom teaching.

Key features of the Humanoid AI Teacher Robot include

- Human-like Presence: Dressed in a traditional Indian saree and blouse, the robot seamlessly blends into Indian classrooms, providing students with a familiar and

relatable learning experience. - **Multilingual Capabilities:** The robot can converse fluently in multiple languages, catering to the linguistic diversity of Indian classrooms and ensuring inclusivity in education. - **Interactive Teaching:** Equipped with advanced AI and natural language processing, the robot can answer questions, explain concepts, and interact dynamically with students, making lessons engaging and personalized. - **Facial Recognition and Attendance Tracking:** The robot can recognize faces and record attendance automatically, streamlining administrative tasks for human teachers. - **Educational Content Delivery:** A display screen on the robot's chest showcases multimedia content, such as videos, diagrams, and text, enhancing the visual and auditory learning experience. - **Behavior Monitoring and Emotional Support:** The robot can observe and respond to student behavior, offering encouragement and ensuring a respectful, supportive environment.

Supporting Human Teachers, Empowering Students

The AI Teacher Robot is not designed to replace human educators but to complement their efforts. By taking over routine tasks like attendance, answering repetitive queries, and providing personalized support to students, the robot allows teachers to focus on creative and high-impact teaching. It also ensures that students receive consistent guidance, even in large classrooms, bridging gaps that might arise due to teacher workload.

Pioneering the Future of Education

At iSpark, we believe that the integration of AI and robotics into education is not just a trend—it's the future. Our Humanoid AI Teacher Robot is a testament to this vision, showcasing how technology can be harnessed to enhance the teaching and learning experience. With a focus on scalability and adaptability, we aim to make this innovation accessible to schools across India, empowering educators and inspiring the next generation of learners. Through our robust R&D and Product Development initiatives, iSpark continues to lead the charge in reshaping education for the digital age, making learning smarter, more inclusive, and future-ready.

Senior Engineer (R&D) & Project Manager

Prathap is a highly skilled and dedicated Senior Research and Development Engineer and Project Manager, driving innovation in STEM education through advanced technology solutions. His work focuses on creating impactful tools and programs that make learning more dynamic, engaging, and accessible for students and educators alike. As the head of the iSmart Robot initiative, Prathap has led the development of Tamil Nadu's first AI-powered teaching assistant. This groundbreaking solution enhances classroom experiences by empowering teachers, improving student understanding, and streamlining administrative tasks like automated attendance management. With advanced AI-driven capabilities and multilingual support, the iSmart Robot addresses diverse educational needs, setting new standards in the field of educational technology. Prathap's technical expertise is backed by a solid foundation in industry roles, including quality control at Daimler India and machinery operations at Tube Investments. Beginning his career as a STEM Facilitator, he demonstrated a passion for designing and delivering practical learning experiences that bridge theoretical knowledge with real-world applications. His approach to

innovation combines deep technical knowledge with a commitment to making education more effective and accessible. Prathap's ability to manage complex projects and foster collaboration ensures that every initiative he leads delivers significant value to educators and students, preparing them for a future driven by technology. Prathap's vision and dedication continue to inspire progress, shaping the future of STEM education and empowering the next generation of innovators.

Application Developer

Bersin B is an application developer at iSpark Learning Solutions, where he has been instrumental in the development of the iSmart humanoid robot. Leveraging his expertise in Linux-based systems, Flutter, and Python AI, he created the full-functioning software that powers iSmart, handling every aspect from initial development to rigorous testing. Bersin's technical skills and attention to detail have contributed to the iSmart project's success, making it an innovative tool in AI-driven robotics. His commitment to advancing technology ensures that iSpark remains at the forefront of impactful solutions in the AI and robotics space.

AI Engineer

Karthiksaran D is an AI Engineer at iSpark Learning Solutions with a strong foundation in artificial intelligence, full-stack development, and IoT-based systems. He began his journey at iSpark as a Robotics Intern, where he gained hands-on experience in developing prototypes such as smart irrigation systems, health tracking devices, and automation tools using NodeMCU and ESP32. Building on this, he transitioned into a Web Application Developer role, where he worked extensively with React.js and Firebase to create integrated platforms for trainers and students, and also developed iEnv, a Python desktop application that unified access to more than fifteen educational platforms, simplifying workflows for educators. Currently, as an AI Engineer, he focuses on building intelligent agents and scalable backend services using Python, Flask, and Google Cloud, with a particular emphasis on integrating large language models such as Gemini and Imagen into real-time applications. His key projects include a learning personalization agent that offers study advice based on student performance data, a voice cloning and conversational bot integrated with multilingual support, and AI-powered tools like image generators and chatbots for personalized learning experiences. Proficient in Python, JavaScript, SQL, React.js, and cloud APIs, and familiar with modern AI frameworks and DevOps practices, Karthiksaran has consistently combined technical knowledge with creativity to deliver impactful solutions in education technology. Despite challenges, he is deeply committed to continuous learning, late-night practice, and building technology that creates real-world impact. His career goal is to evolve into a well-rounded AI Product Engineer who can design, build, and deploy intelligent applications that transform the way people learn and interact with technology.

Design and Hardware Engineer

Muthukumar is a skilled Design and Hardware Engineer at iSpark Learning Solutions, specializing in mechanical engineering. His expertise has been pivotal in the development of iSmart, where he led the hardware design and mechanical engineering aspects. Muthukumar's proficiency in creating 3D models has been essential to multiple projects, ensuring precision and innovation in product development. His dedication to crafting robust and efficient hardware solutions contributes significantly to the success of iSpark's educational tools. Muthukumar's commitment to excellence and attention to detail make him an invaluable part of the R&D team, driving forward the company's mission to blend technology and education seamlessly.