B.Sc. Computer Science & Machine Learning

WHAT IS UNIQUE ABOUT LOYOLA'S B.Sc. COMPUTER SCIENCE & MACHINE LEARNING?

Loyola's B.Sc. Computer Science & Machine Learning program offers a unique blend of theoretical knowledge and practical experience, ensuring students are well-equipped with both core computer science principles and the latest industry standards in Machine Learning & AI.

- **Comprehensive Curriculum:** Students gain expertise in core computer science subjects while also delving into the intricacies of Internet of Things technologies.
- **Industry Integration:** The program emphasizes on-the-job training, internships, and industry visits, providing students with real-world exposure and ensuring they are up-to-date with current industry practices.
- **Practical Learning:** Through workshops and hands-on projects, students receive practical exposure to IoT applications, enabling them to apply theoretical concepts in real-world scenarios.
- **Exclusive Recruitment Opportunities:** Loyola organizes exclusive recruitment drives, connecting students with potential employers and enhancing their employability.
- **Soft Skills Development:** The program focuses on enhancing students' analytical skills, teamwork abilities, and personality development, ensuring they are well-rounded professionals ready to excel in the workplace.
- **Employability:** With a strong emphasis on practical experience and industry-relevant skills, graduates of Loyola's CSML program are readily employable, equipped to tackle the challenges of the rapidly evolving technology landscape.

Machine Learning: Where Data meets intelligence, shaping tomorrow's decisions

About the Programme:

- The B.Sc. Computer Science and Machine Learning (CSML) degree program combines the fundamentals of computer science with the principles of machine learning. Students will gain an in-depth understanding of topics such as algorithms, data structures, artificial intelligence, programming, databases, and software engineering. Additionally, they will learn the foundations of machine learning, which includes recognizing how computers can learn through data. This degree sets graduates up for success in data science, software engineering, and other related fields. The skills acquired in this degree will keep them competitive in the ever-changing world of computer science.
- The program offers unique opportunities for students to gain practical exposure through workshops, industry visits, guest lectures, and seminars with industry experts. This program also provides on-the-job training, internships and hands – on experience of working with various machine learning real world problems that can help develop analytical skills, team work abilities, personality development, and readies students to become employable.

Infrastructure Facilities

- Spacious Campus
- Excellent laboratories that provide the best practical knowledge to the students
- Good infrastructure
- College Hostel
- Medical facilities
- Bank
- Innovation Centre
- Cafeteria
- Stationery

Placements/Higher Education/Soft Skills

- CRT training is provided for students to secure placements in campus interviews.
- Academic Consultants for higher Education.
- Soft skills classes are conducted to improve communication skills.

Library and Information Center

- Delnet
- Inflibnet
- Online Journals
- Books

Activities of the Department:

- Industrial visits are organized every year to improve students' learning skills.
- Parent-teacher meetings are conducted every semester to improve communication between teachers and parents.
- Science Day to explore student talents through a project exhibition
- Workshops, seminars, internship programs, and minor projects

LOYOLA ACADEMY

Career Opportunities:

After successful completion, students will be placed as

- Data Scientist/ Data Analyst
- Machine Learning Engineer
- AI Research Scientist
- Scientific Assistant
- Data Engineer
- Software Engineer
- Consultant/ Advisor/ Entrepreneur
- Computer Vision Engineer

Higher Education Opportunities:

Students are also eligible to pursue higher education in:

- M.Sc. (Big Data Analytics)
- M.Sc. (Computer Science)
- M.Sc. (Data Science)
- M.Sc. (ML & AI)
- M.Sc. (Information Technology)
- M.C.A
- MBA or any other allied program.

ADMISSION GUIDELINES

Candidate must have completed 10+2 with minimum of 60% or above in MPC/ MEC at Intermediate level.

"EMPOWERMENT THROUGH LEARNING, ACTION THROUGH UNDERSTANDING"

B.SC. COMPUTER SCIENCE & MACHINE LEARNING

1st SEMESTER

Theory: General English-I | Value Education & Personality Development | Fundamentals of IT & Data Visualization | Differential Equations & Matrices | Problem Solving & Programming in C | Basic Electronics & Circuits

Practical's: Fundamentals of IT & Data Visualization | Basic Electronics & Circuits | C Programming

2nd SEMESTER

Theory: General English-II | Indian Heritage & Culture | Probability & Statistics for ML | Vector Calculus & Number Theory | Fundamentals of Data Structures using C | Python Programming

Practical's: Probability & Statistics for ML | Fundamentals of Data Structures using C | Python Programming

3rd SEMESTER

Theory: Environmental Studies & Gender Sensitization | GE -ML for Everyone | Discrete Mathematics | Database Management Systems (DBMS) | Digital Logic & Design | Introduction to AI

Practical's: GE - ML for Everyone | Digital Logic & Design | Introduction to AI | DBMS

4th SEMESTER

Theory: Software Engineering & Agile Methodologies | Web Technologies | Data Mining | Design & Analysis Algorithms | Introduction to Machine Learning | Operating Systems

Practical's: Web Technologies | Introduction to Machine Learning

5th SMESTER

Theory: Big Data Analytics/ Social Media Analytics | Data Security / Cyber Security | Optimization Theory | Deep Learning | Cognitive Computing | Natural Language Processing (NLP)

Practical's: Deep Learning | NLP

6th SMESTER

Theory: Cloud Computing / Human Computer Interaction | IOT/ Block Chain | Computer Vision

Practical's: Major Project

EXTRA-CURRICULAR ACTIVITIES

Sports | NCC | NSS | AICUF | Magic Youth | Resonance

EXTENSION ACTIVITIES

PLANET | Industrial visits

GENERIC ELECTIVE

ML for Everyone

STUDENT SUPPORT

Academic counseling | Mentoring

NON-CGPA COURSES

NPTEL | Certificate Course | CRT | Clubs | Soft Skills | Bridge Course | Self-study

STUDENT CENTRIC METHODS

Minor projects | Internships | Research papers | Poster presentation | Group discussion/ Seminar/debate | Peer learning

Loyola Academy