

# MACHINE LEARNING FOR CYBER SECURITY

The "Machine Learning for Cybersecurity" bootcamp is crafted to empower participants with cutting-edge techniques to tackle the evolving landscape of cyber threats. As cyberattacks become more sophisticated, traditional security measures often fall short. This bootcamp introduces participants to the powerful synergy between machine learning and cybersecurity. By the end of the bootcamp, participants will have hands-on experience in developing machine learning models that can significantly enhance the effectiveness of cybersecurity defenses, positioning them at the forefront of modern security practices.



## Objectives

To equip participants with the foundational knowledge and practical skills in machine learning, focusing on its applications in cybersecurity. The course will cover various machine learning techniques, from regression to unsupervised learning, and demonstrate their relevance to cybersecurity challenges.



## Expected Outcomes

Participants will gain a solid understanding of machine learning concepts, learn to apply different algorithms and evaluate models effectively. By the end of the course, they will be able to use machine learning techniques to address cybersecurity issues and implement solutions in real-world scenarios.

### Duration

**5 days**

- **5 days** training (online)
- **2 days** training (offline)

### Dates

#### Online Training

- **Start Date:** 03<sup>rd</sup> Feb 2025
- **End Date:** 05<sup>th</sup> Feb 2025

## Participant Prerequisites

- Familiarity with Linux and Windows operating systems
- Proficiency in at least one programming language (Python, C++, or Java).

## Modules/Topics to be Covered

- Basic Python Programming
- Python Libraries for Machine Learning
- Data Pre-processing & Feature Engineering for Cybersecurity Data
- Understanding Machine Learning Algorithms and their applications in security
- Case studies (Intrusion detection systems, malware detection, and Anomaly detection)

Target Participants

**Students**

Expected No. of Participants

**40**

Mode of Delivery

**Essentials Module: Online**  
**Bootcamp: Offline**

## Process Flow



**Coordinated by**

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Register at : ▶▶▶▶

<https://bootcamps.isea.app/register>