

Project Design Phase-II

Technology Stack (Architecture & Stack)

Project Name	AI-enhanced intrusion detection system
--------------	--

Technical Architecture:

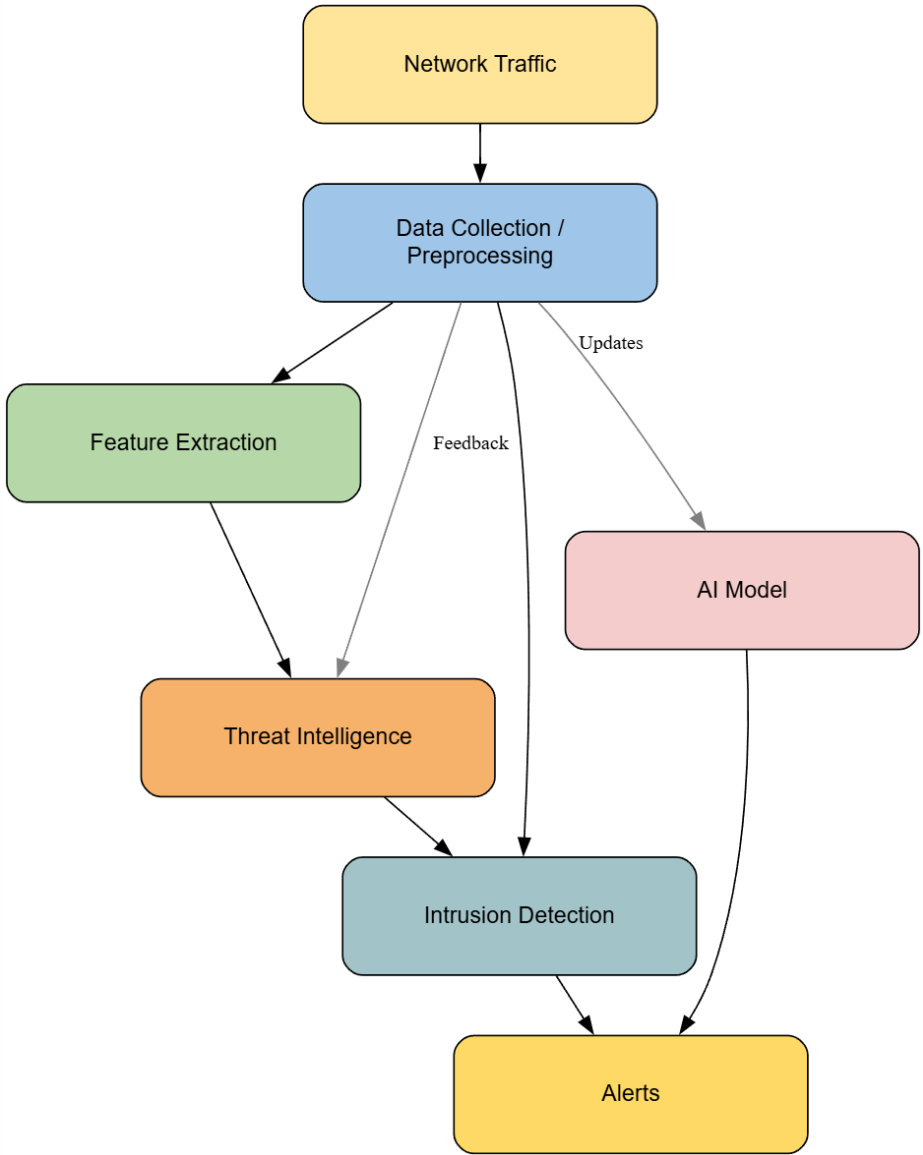


Table-1: Application Components

S.No	Component Description	Technology
1	User Interface	HTML, CSS, JavaScript etc.
2	Application Logic-1	Python / Flask
3	Application Logic-2	Intrusion Detection Engine (Scikit-learn, TensorFlow, etc.)
4	Application Logic-3	Threat Intelligence Integration
5	Database	MySQL / NoSQL (MongoDB)
6	Cloud Database	IBM DB2 / IBM Cloudant
7	File Storage	IBM Block Storage / Local Filesystem
8	External API-1	VirusTotal / IBM X-Force Exchange
9	External API-2	GeoIP API / Security Scorecard API
10	Machine Learning Model	Anomaly Detection / Supervised Classification
11	Infrastructure (Server / Cloud)	Local, Cloud Foundry, Kubernetes

Table-2: Application Characteristics

S.No	Characteristics Description	Technology
1	Open-Source Frameworks	Flask, Scikit-learn, TensorFlow, React
2	Security Implementations	SHA-256, JWT, Firewalls, IAM Controls, OWASP Practices
3	Scalable Architecture	Microservices, 3-tier architecture

4	Availability	Load Balancers, Distributed Servers, Cloud Failover
5	Performance	Caching, CDN, Async Processing, Efficient DB Queries