

INTRODUCTION

- Software is at the heart of every computer system in the world such as: computers, websites, mobiles, IOT, networking, firewalls, etc.
- Software can be the most vulnerable part of a system.
- Cyberattacks often exploit software vulnerabilities in their attacks.
- Software developers continue developing and publishing insecure code.

LITERATURE REVIEW

Research indicates that there are multiple reasons why software developers are not producing secure software.

- **Workplace culture**, where security is not a priority for entire team or company.
- **Feature focused**, where the individuals are under pressure to deliver user features, security being an after-thought if time permits.
- **Lack of knowledge**, where the software developers don't know how to write secure software to start with.

EXISTING FRAMEWORKS

There are a number of existing frameworks designed to help developers write secure code.

Regulatory

- EU General Data Protection Regulation (GDPR).
- California Consumer Privacy Act & Privacy Rights Act.

Independent Standards & Recommendations


- ISO 29100, 27018, 26514 & 27034
- IEC 60300
- NIST SP 800-218
- OWASP

RESEARCH QUESTIONS

Existing research suggests that developers do not implement security in their software. This research aims to answer the following:

- Are software developers using existing cybersecurity frameworks during the development of software?
- Can a lightweight cybersecurity framework help developers implement security in software they produce?

METHODOLOGY

- Interview 10 software development professionals.

- Various companies and experience levels.
- Do they implement security in the software they develop?
- Why is security important / not important to them?
- Are they familiar with existing frameworks and regulations?
- What would make security more important for them?

At the end, based on the answers of what's working and what's important to the developers, a new framework will be proposed to help the developers write secure software.