

# Mini SaaS: Phishing Email Simulator

## 1. Objective

Build a minimal SaaS-style web application that allows a user to send a **crafted phishing-style email**, demonstrating:

1. Go backend development
2. Docker (Kubernetes deployment will be nice to have)
3. Basic cyber understanding of email spoofing

## 2. Functional Requirements

### Application Requirements

- Written in **Go**
- Exposes a simple web UI with a form (UI is not the main objective, it can be as simple as you want):
  - Recipient email
  - Subject
  - Message body
- On submit:
  - Sends a **real email** to the provided address
  - Email must appear as sent from:
    - **Display Name:** **Donald Trump**
    - **Email address:** configurable (env var)

### Email specifics

- Email must be crafted manually in code (not a high-level “send mail” helper):
  - Explicit headers:
    - **From**
    - **To**
    - **Subject**
    - **Date**
    - **Message-ID**
- Using SMTP is required

- Basic Authentication is allowed (and encouraged)

## Validation

- Basic input validation:
  - Valid email format
  - Non-empty subject/body
  - Reasonable length limits

## Infrastructure

### **Containerization:**

- Dockerfile included

### **If chosen to use Kubernetes**

- Application runs in Kubernetes
  - Provide:
    - Deployment
    - Service
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## **3. Documentation**

Include a short README explaining:

1. Why the email triggers security warnings
2. Which email authentication mechanisms are violated
3. What would be required to make such an email pass authentication in a real-world scenario