



# Successful Attacks in WWI and WWII

Derek Wales



A black and white photograph of a war-torn environment. In the foreground, two soldiers in helmets and military uniforms are crouching. The soldier on the left is looking towards the right, and the soldier on the right is looking down. They are both holding rifles. In the background, there is a large, dark, cylindrical object, possibly a tank or a large barrel, and a pile of rubble and debris. The sky is bright and overexposed.

# Agenda

## 01 Exploratory Data Analysis

Intro and Data Processing prior to model building.

## 02 Video

Context for the Model/Study

## 03 Model

What factors are key and why I used BIC over AIC.

## 04 Results

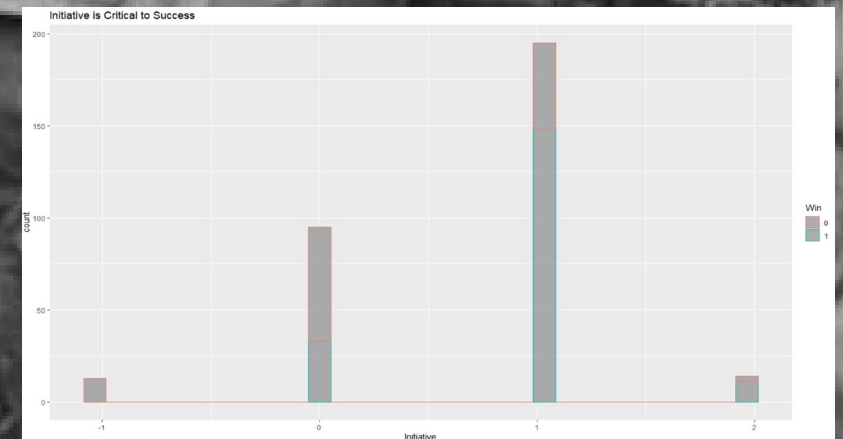
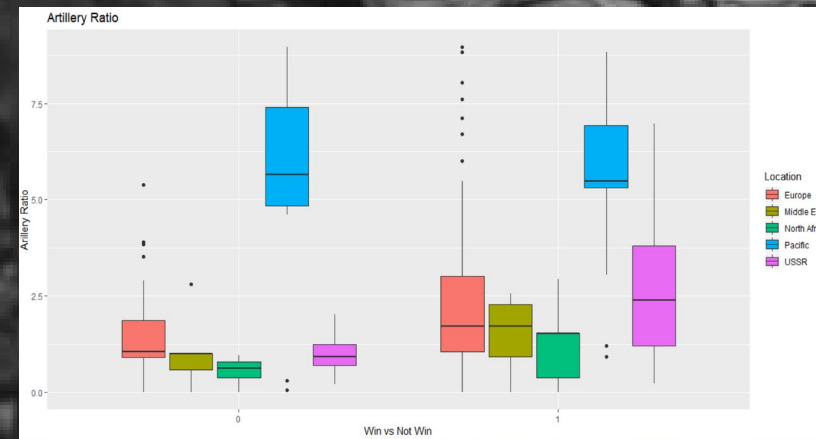
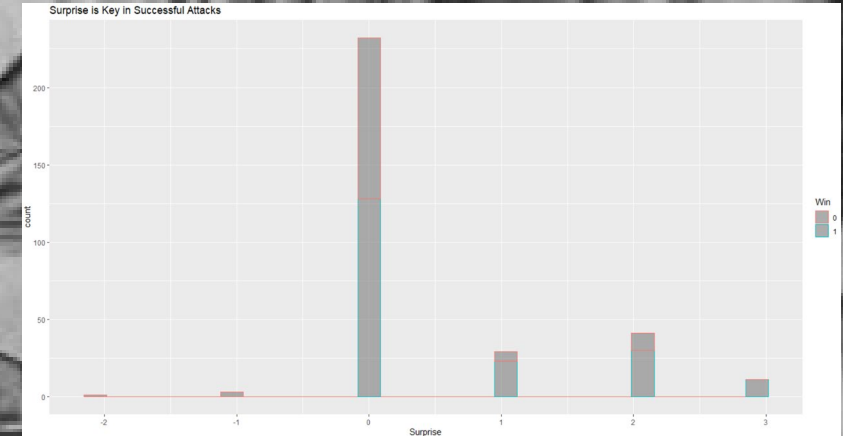
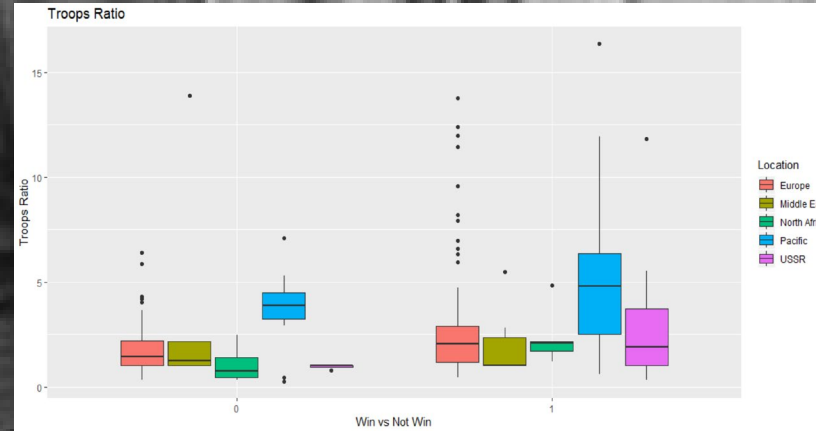
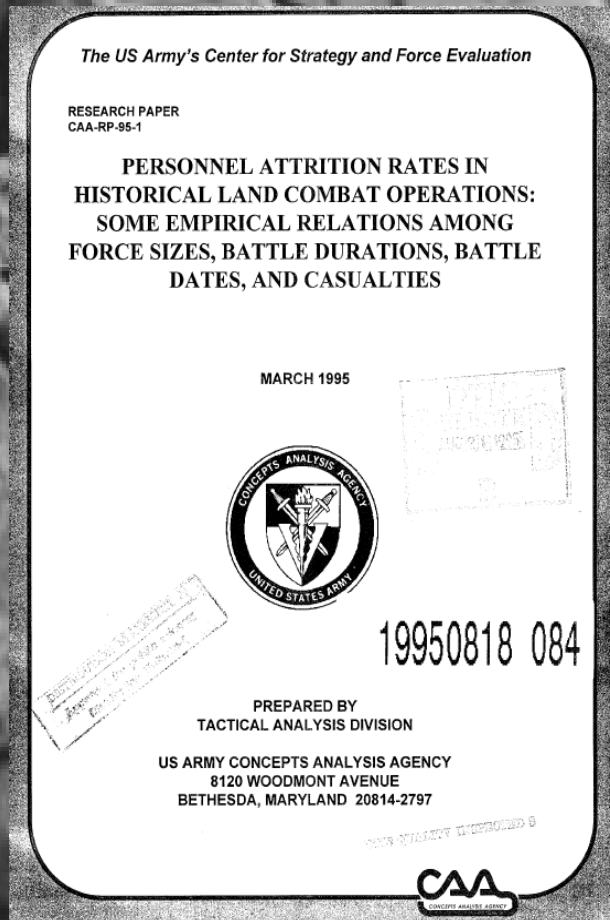
Conclusions and Implications for current operations

## 05 Questions

Sure!

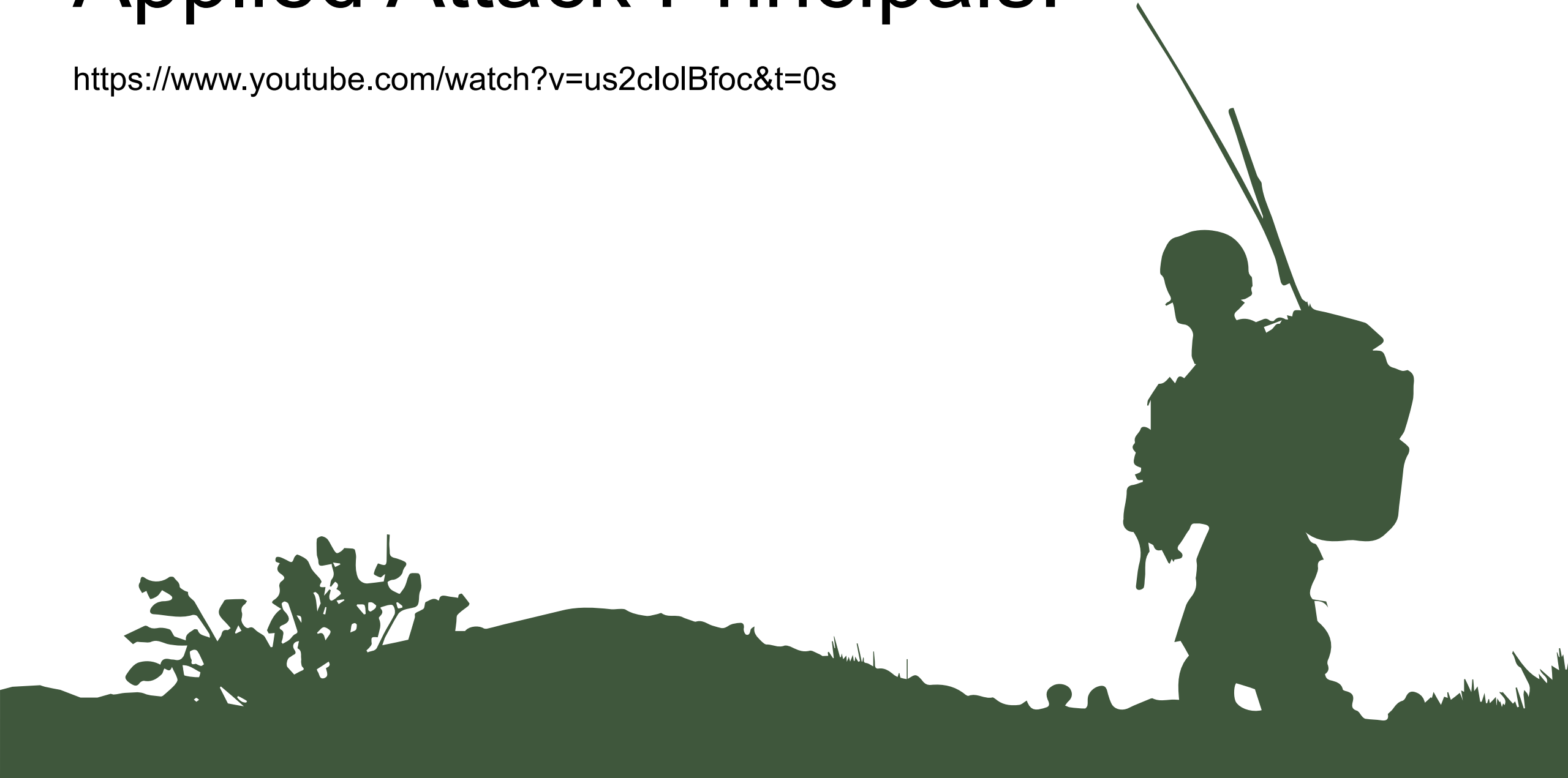
# Background

## Exploratory Data Analysis



# Applied Attack Principals:

<https://www.youtube.com/watch?v=us2clolBfoc&t=0s>



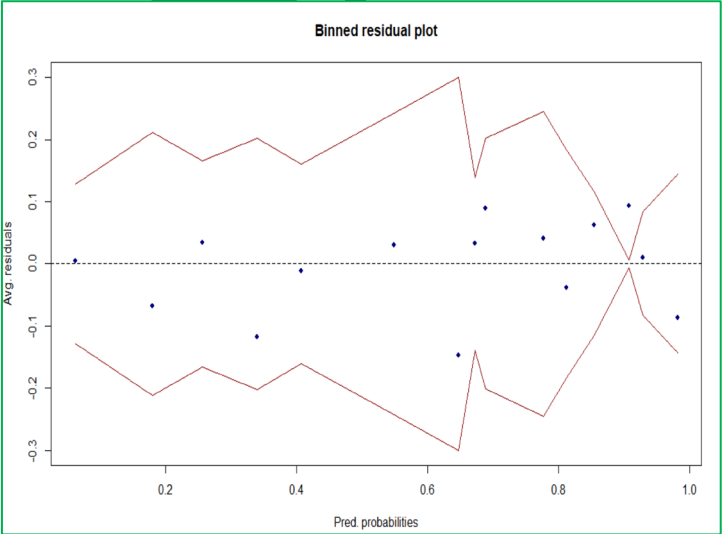
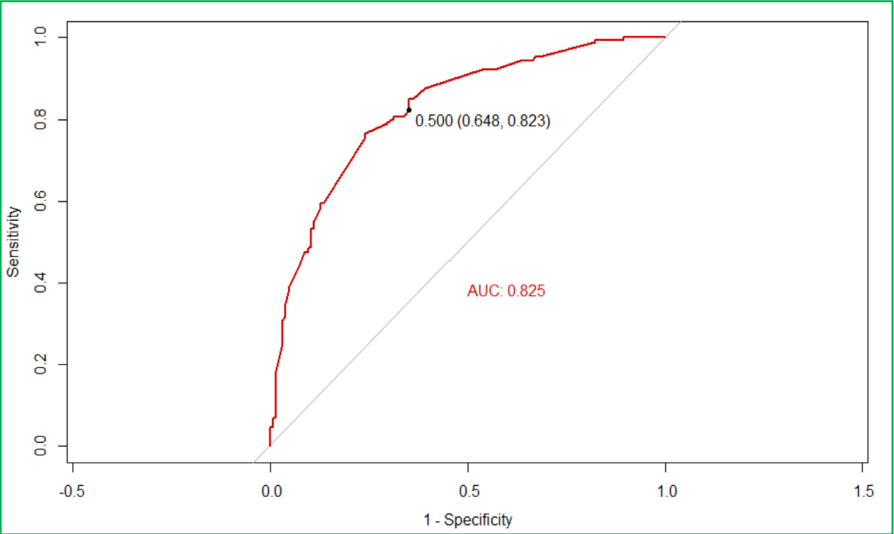
# Model/Validation

## Selection Criteria - BIC

$$\text{Win}_{(WW1+WW2)} = \beta_0 + \beta_1 \text{XSurprise} + \beta_2 \text{XAir.Power} + \beta_3 \text{XMorale} + \beta_4 \text{XInitiative} + \beta_5 \text{XLeadership}$$

$\beta_0$	$\beta_1$	$\beta_2$	$\beta_3$	$\beta_4$	$\beta_5$
1.1584	0.3948	0.4754	0.6865	1.2205	1.0418

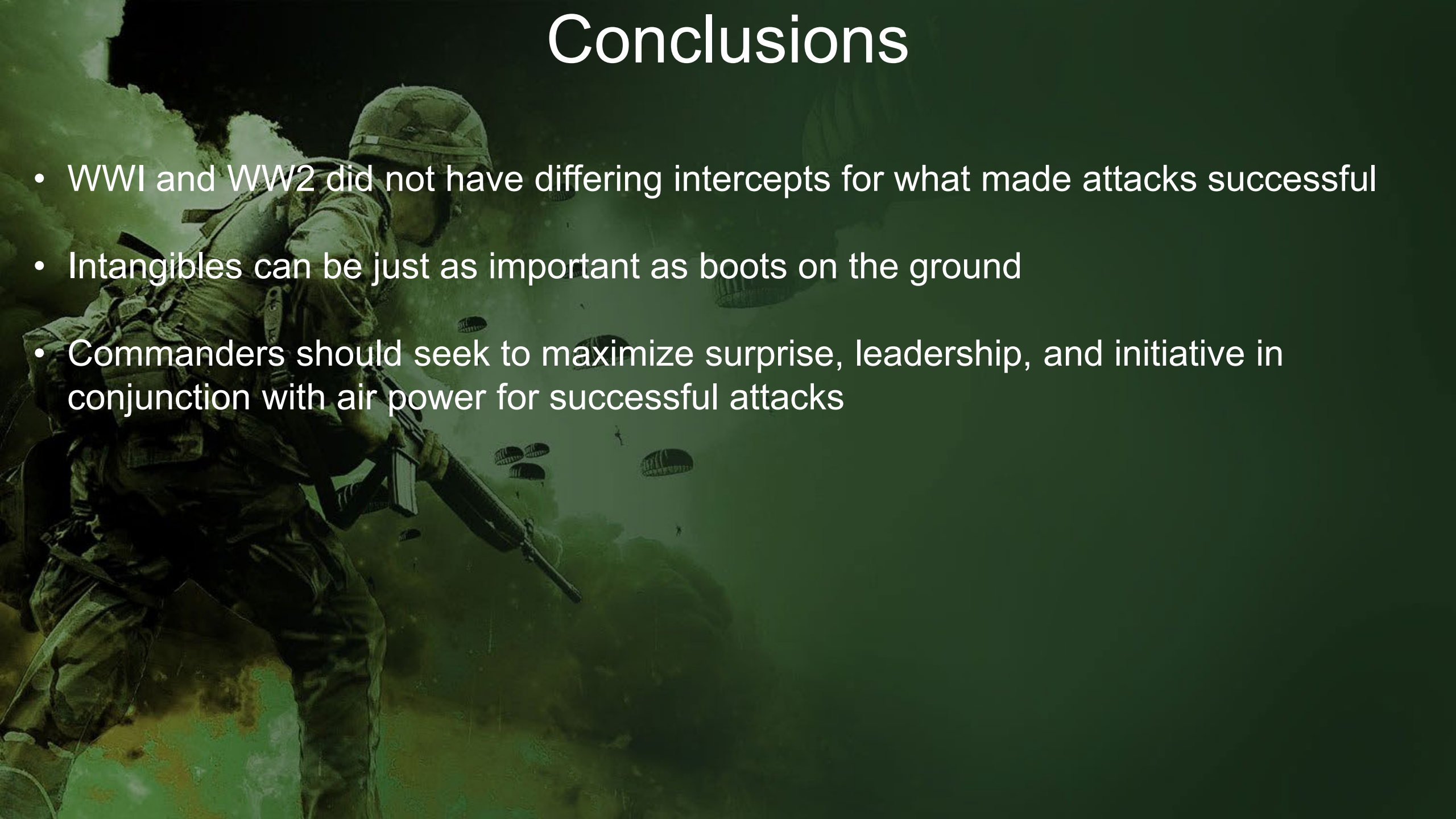
Metric	Value
Accuracy	0.754
Sensitivity	0.822
Specificity	0.648
AUC	0.825





# Conclusions

- WWI and WW2 did not have differing intercepts for what made attacks successful
- Intangibles can be just as important as boots on the ground
- Commanders should seek to maximize surprise, leadership, and initiative in conjunction with air power for successful attacks



**"FLANK EM THEN  
SPANK EM."**

**-SUN TZU**

**Questions?**



# Sources

- <https://imgur.com/gallery/QHYGr>
- <https://www.mlbonlinegiants.com/world-war-2-powerpoint-template/world-war-2-powerpoint-template-terrific-world-war-2-powerpoint-template-2-start-of-wwii/>
- <https://www.free-powerpoint-templates-design.com/free-powerpoint-templates-design/free-military-powerpoint-templates-design/page/2/>
- US Army Personnel Attrition Survey
- <https://www.archives.gov/research/military/ww2/d-day>

