

About This Document

- This document accompanies the Medical Screening Tests App.
- This document is hosted at GutHub.
- This document must be saved as a .PDF file to be readable at Github.

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#                               ScreeningTest                                 
#####  
#  
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#  
# ScreeningTest: PROGRAM PURPOSE.  
#  
# Medical screening tests vaunting very high "general accuracy" can give  
# staggering levels of false results when the prevalence of a disease is low.  
# This program explores the effect the prevalence of an infection in a  
# population on the usefulness of screening tests. The goal is to  
# demonstrate that screening tests are complex and less reliable  
# than commonly supposed.  
#  
# Inputs:  
# A GUI invites the user to enter the following medical test statistics.  
# Population:  
# Test Sensitivity:  
# Test Specificity:  
# Start of Prevalence Range.  
# End of Prevalence Range:  
# Prevalence of Interest:  
# CheckBoxes allowing the plotting of different statistics.  
#  
# Outputs:  
# (1) A plot with:  
# x axis. A range of disease prevalences.  
# y axis:  
# Positive Predictive Value.  
# Negative Predictive Value.  
# False Positives (NPV)  
# False Negatives (NPV)  
# General Accuracy (A somewhat misleading item !)  
# Prevalence of Interest (Vertical line).  
# (2) A Matplotlib menu permitting saving the plot, zooming etc.  
# (3) A CSV file with the plot data.(Optional)  
# (4) A print of the plot data. (Optional)  
#  
#  
#####
```

