Python Based Audit Software



Revolutionizing the Way We Audit.

# JCAATs in Practice：Smart Auditing for General Ledgers

Shi-Ming (Jack) Huang and Sherry Huang

ICAEA INTERNATIONAL
INTERNATIONAL COMPUTER AUDITING EDUCATION ASSOCIATION

# Preface

The world of accounting and auditing is rapidly evolving, with technological advancements transforming the landscape. As financial data grows exponentially, traditional auditing methods are proving inadequate. Auditors must now ensure the accuracy of financial statements while navigating complex datasets, documents, and systems. This shift necessitates a new approach that leverages technology to enhance auditing efficiency and effectiveness. "JCAATs in Practice: Smart Auditing for General Ledgers" addresses this need.

The textbook begins with a paper titled *General Ledger Computer Auditing Practice: Implementing a Smart Auditing Approach* by Sherry Huang, the co-author of the book (Huang, 2023B). Jacksoft Computer-Assisted Audit Techniques (JCAATs) integrate traditional auditing practices with modern data analytics and AI. This allows auditors to delve deeper into financial records, identify anomalies, and provide insightful assessments. This book serves as a comprehensive guide for auditors to harness the potential of JCAATs in their practice.

Integrating real-world case studies from accounting firms, this book is complemented by three additional ICAEA courses on NASBA CPE's General Ledger Smart Auditing, offering clearer explanations and demonstrations of JCAATs AI audit software. Readers are encouraged to take the ICCP exam to certify their proficiency in using CAATs for audits.

Structured as a step-by-step guide, this book begins with fundamental JCAAT principles and progresses to practical applications, providing detailed examples and case studies. Each chapter builds on the previous one, expanding the reader’s knowledge and understanding.

Beyond practical guidance, this book discusses the broader implications of adopting JCAATs, including ethical considerations, potential challenges, and the future of auditing in a digital world. It aims to equip auditors with both the technical skills and critical thinking needed to navigate the evolving profession.

"JCAATs in Practice: Smart Auditing for General Ledgers" is for external/internal auditors, newcomers, and business professionals alike. By embracing JCAATs, auditors can enhance the accuracy, efficiency, and reliability of their work. Join us on this journey towards smarter, more effective auditing.

Jack Huang and Sherry Huang

# Table of Content

Table of Content ..... 2
Chapter 1: Introduction ..... 4
Background ..... 4
Differentiate AICPA Audit Data Standards ..... 5
General Ledger Testing ..... 7
Experiment with a Real-World Audit Scenarios ..... 8
Chapter 2: Start your project in JCAATs ..... 9
AICPA Audit Data Standards - General Ledger Standard ..... 9
The description of related tables ..... 9
A quick view of the JCAATs interface ..... 10
Create a project in JCAATs ..... 10
Import Data files as tables ..... 12
Data Cell Function Menu ..... 21
Chapter 3: Begin Your Smart-Auditing Analysis ..... 23
Audit objectives ..... 23
Check and Verify Data in a table ..... 23
Test 3: Check for gaps in journal entry numbers ..... 26
Chapter 4: Examine the population for incomplete journal entries ..... 29
Audit Objectives ..... 29
Technology for laying numerical data ..... 33
Test 4.2: Stratify command ..... 33
Data aging analysis method ..... 35
Test 4.3: Generate an aged summary ..... 35

Chapter 5: Implementing Machine Learning to Detect Unusual Entry Amounts ..... 37
Fraud detection for SAS no.99 Implementation..... 37
Machine Learning for Auditing..... 37
JCAATs Machine Learning Commands..... 38
Figure 5-3: The outlier analysis diagram ..... 40
Audit Procedures for Verification of the amount accuracy ..... 40
Test 5.1: Examine Entries amount unusual- Entries where the amount is an outlier number ..... 40
Chapter 6: Utilizing Text Mining to Identify Unusual Description Words in Entries ... 46
Understanding Text Mining for Auditing..... 46
Introducing Text Mining Functions in JCAATs ..... 50
Audit Planning..... 50
Audit Procedures by Using Text Mining..... 51
Test 6.1 - Examine Entries Description has Special Terms. ..... 51
Test 6.2- Examine Entries Description has unusual words ..... 55
Chapter 7: Report and Script in JCAATs ..... 63
Introduction ..... 63
Test 7.1- Create the reports by using Export function (Excel and XML files are examples for this section.)..... 63
Test 7.2- Create a Python Script for the automatically executed command in the duplication analysis ..... 67
Ideas for Further Study..... 71
Reference..... 75
Appendix 1: JCAATs Audit Command List ..... 77
JCAATs in Practice: Smart Auditing for General Ledgers..... 83

# JCAATs in Practice: Smart Auditing for General Ledgers

Copyright @ 2024 by International Computer Auditing Education Association (ICAEA).
All rights reserved.

## Authors

Shi-Ming (Jack) Huang and Sherry Huang

## About ICAEA

International Computer Auditing Education Association (ICAEA) is registered as a non-profit organization in BC, Canada with Society Incorporation Number S-0060477. It is also registered as a USA NASBA CPE sponsor with Sponsor Identification Number 147070.
**Office:** 21615 49A Ave, Langley BC V3A 6C4, Canada
**Web:** https://www.icaea.net

## Published by

Jacksoft Commerce Automation Ltd. (ICAEA Taiwan Chapter)
**Office:** 3F.-2, No. 180, Chang-An W. Rd., Datong Dist., Taipei City 10349, Taiwan
**Email:** jcaats@jacksoft.com.tw

No part of this publication may be reproduced, means-electronic, mechanical, photocopying, recording, or otherwise-without prior written permission of the publisher. Requests to the publisher for permission should be sent electronically to: icaea@icaea.net with the subject line "reprint permission request."

**Limit of Liability**: The ICAEA publishes this document for informational and educational purposes and is not a substitute for legal or accounting advice. The ICAEA does not provide such advice and makes no warranty as to any legal or accounting results through its publication of this document. When legal or accounting issues arise, professional assistance should be sought and retained.

**Publication date: August, 2024**

**Suggested Price: $100.00 USD**

**ISBN: 978-626-97833-6-6**