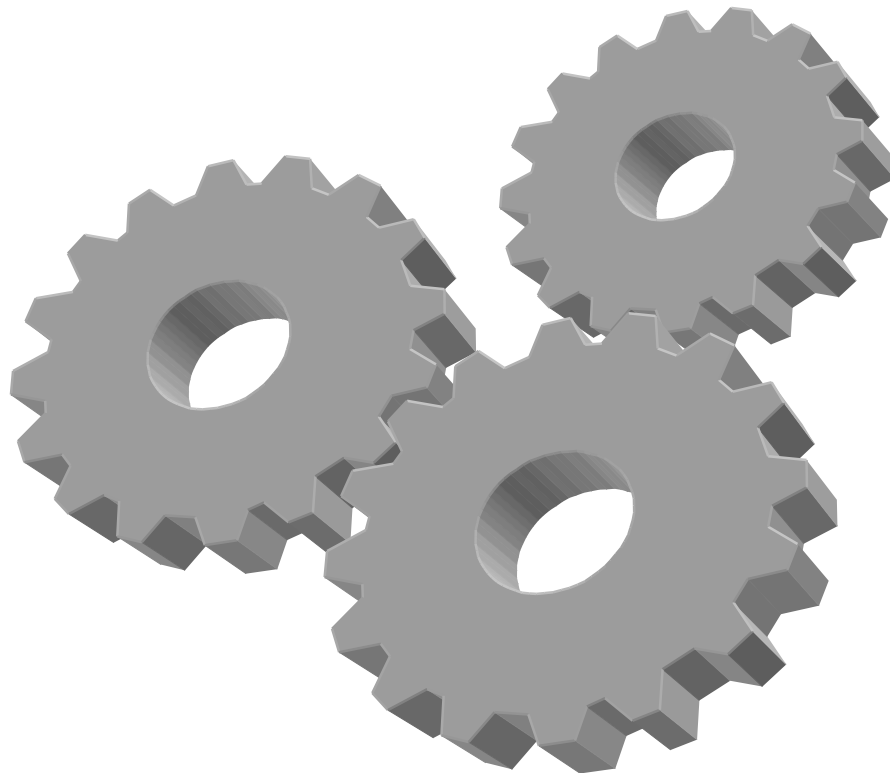[1.0]
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[Auto Trader Fraud Calculator: Software User Manual]

Revision History

Version	Date	Revision Description
1.0	August 2, 2011	Initial product release.

Table of Contents

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1.   Introduction to AutoTrader Fraud Calculator (ATFC)

Welcome to Auto Trader Fraud Calculator, where it helps you buy a car without getting scammed! Having this application under your fingertips allows you to avoid the advertisements with a high percentage of being a scam. In addition, this application provides a quick view of all the listings of a particular make and model and their specifications. A quick and easy alternative to browsing the autotrader.ca website for your perfect car!

Purpose

The purpose of ATFC is to help you save the grief of falling victim to a scam. Although there is no method to completely protect you, ATFC serves to analyze common traits of a scam advertisement and steer you away from those.

2.   Overview

ATFC is capable of many tasks:

- Provide a quick view of car advertisements for a make and model
- Organize the car advertisements by risk
- View a graphical representation of the distribution of the price & mileage
- Add a dummy listing and see it's risk
- See the average pricing and mileage for a make and model

Quick Start Guide

AUTO TRADER FRAUD CALCULATOR (ATFC) is designed as a Java applet. To run this, one must have all necessary .class files. An alternative is to have the developer package the Java applet into a jar file for distribution. In this case, you have the better of two worlds. Although there are many other ways to execute a Java application, these are the two methods that are available for ATFC. Assuming you were able to successfully run the applet, you should now see the GUI interface.

> If you are using Windows 7 please import the jdom.jar file included with the program into the library. (See F.A.Q. for details)

To start off, you must choose a car make from the list at the top left. Continuing on, press on GET CAR MODELS to retrieve the car models of your selected make. After choosing the car make and model, press on GET CAR LISTINGS. Depending on the amount of listings available, this process may take quite a while. Fortunately, you have a progress bar to stay informed on the process.

> This process takes long mostly because retrieving information from an online source requires ATFC to access a significant amount of web pages. Because of this, the process takes quite a while for models with 1000+ listings.

Once the process is complete, you should see at least one list that shows car advertisements from the autotrader.ca website. See Figure 2.1 for an example.
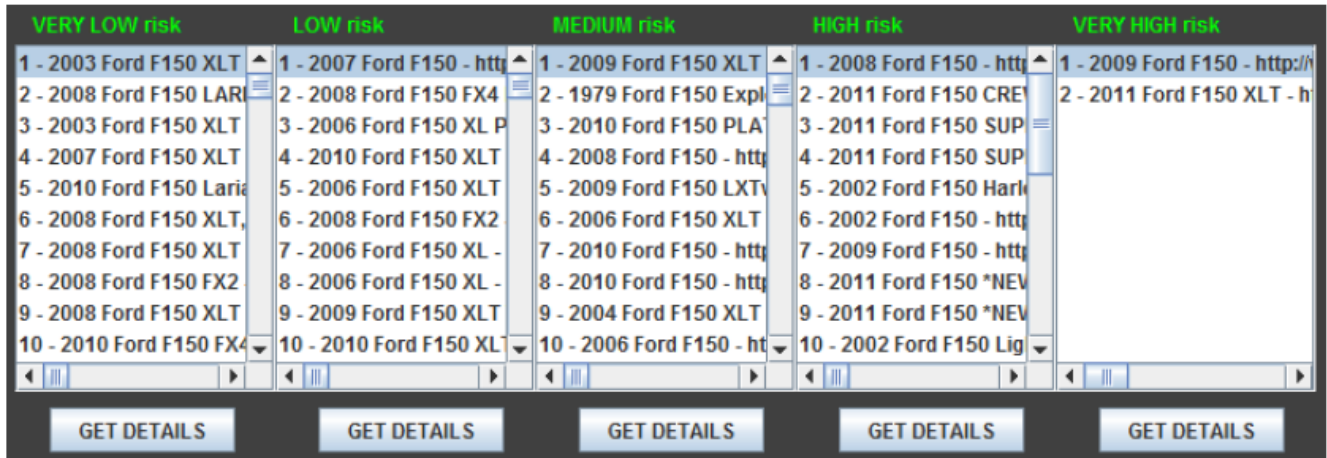
Figure 2.1 – An example of five lists organized by risk

To access any listing and view specifications and a graphical view of the listing, press the GET DETAILS under the list which the listing is chosen from. By doing this, a graph will display itself and the specifications for the listings will be available on the left hand side of the GUI. For more information about the listing, click on the VIEW LISTING button under the specifications list.

3.   Working with the Graphical User Interface (GUI)

Introduction to the GUI

The GUI serves as the most important extension of the project, since it functions as the gate through which you, the user interact with the underlying code. The GUI has been designed with the usability in mind and is thus straightforward, and easy to use. As Figure 3.1 depicts, each section of the GUI is labeled to help you understand what is required input and its relevant output. In the following sections we will explore the individual components of the GUI and their functions.
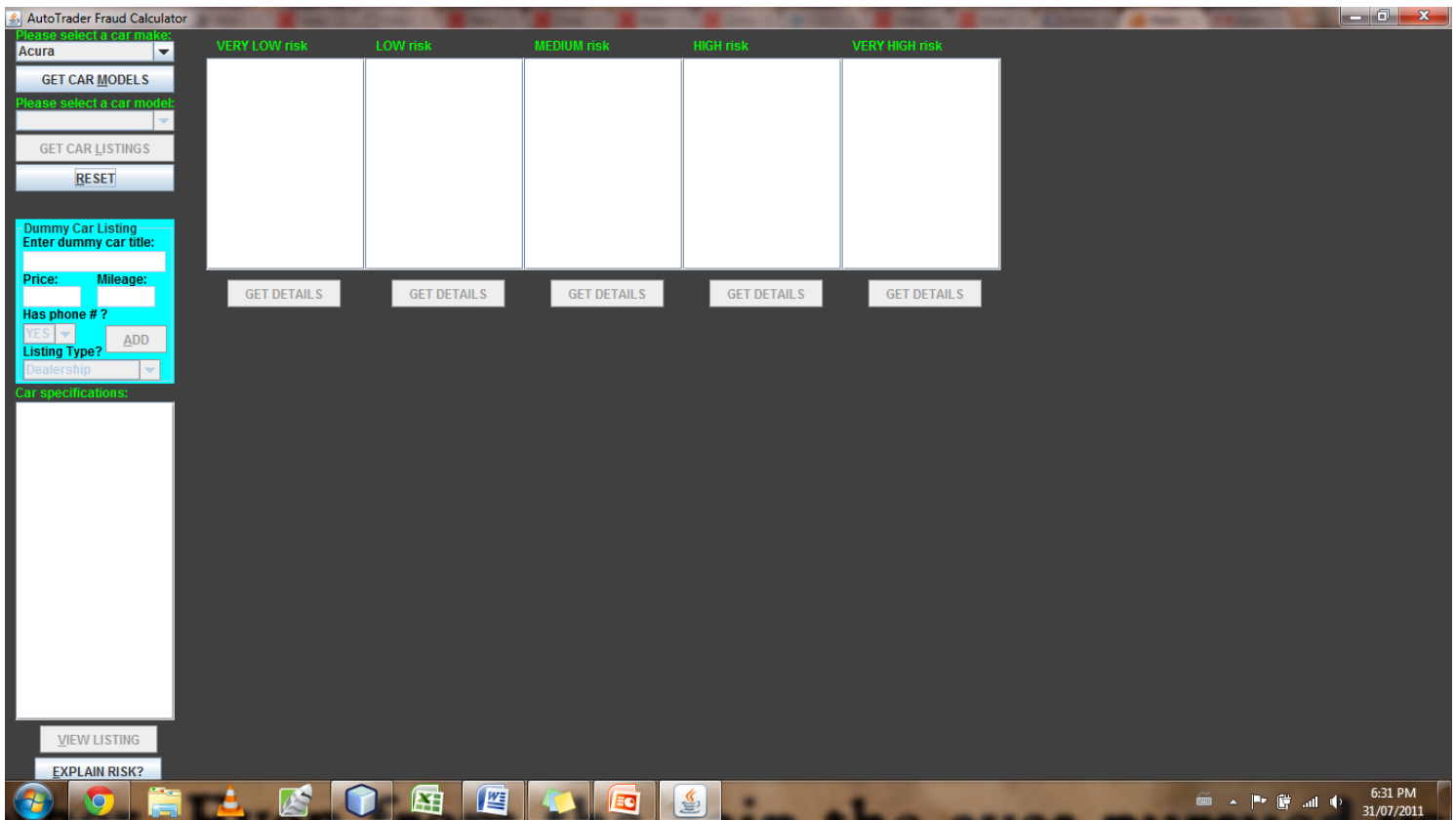
Figure 3.1 – GUI Startup Screen (Windows 7)

Procedures

The top left corner is the primary input panel, which asks you to scroll through the list compiled from the AutoTrader website and select a car make and model.

1. Choose a car make by scrolling thorough the list of available brands in the upper list, as depicted in Figure 3.2. Once you have chosen a car make, click the "GET CAR MODELS" button. (As you can see, you cannot select a car model until you have first selected a car make.)
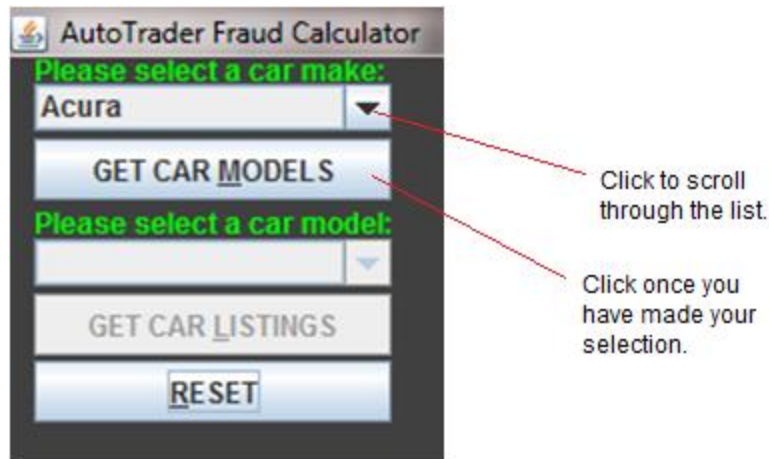
Figure 3.2 – Primary Selection

At any time, click "RESET" to reset the options and start a new selection.

2. After you have selected your car make, the program will retrieve the available car models from the AutoTrader database. You must then select a car model by scrolling through the list, as depicted in Figure 3.3. Once you have made your choice click "GET CAR LISTINGS" to continue onto the next part of the program. At any time in the program, simply click "RESET" to reset the options and start again from the car model selection.
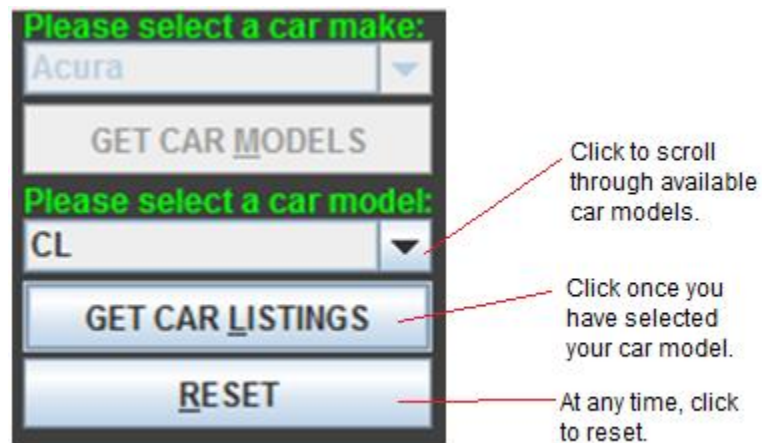

Figure 3.3 – Secondary Selection

3. Once you have selected your car make and model, the program will begin to load the relevant details from the AutoTrader database. You can monitor the program's completion rate through the progress bar below the selection panel, as indicated in Figure 3.4.
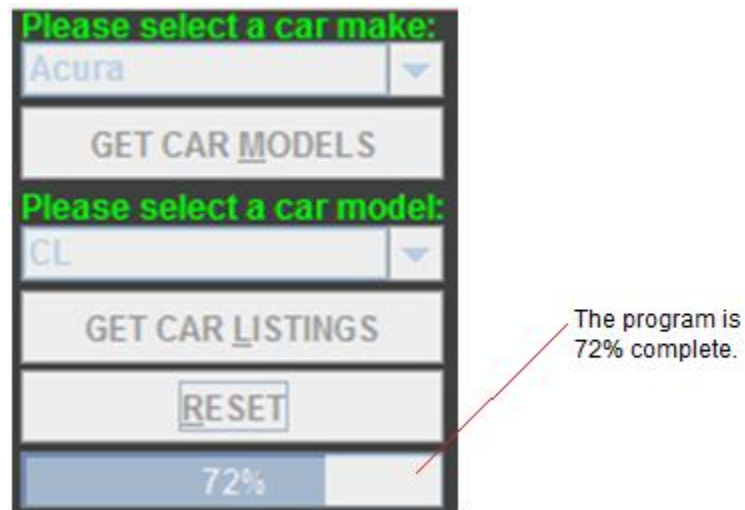

Figure 3.4 – Loading the data.

Popular vehicles (i.e. Honda Civic) with several listings require longer periods of time to display, compared to less abundant vehicles (i.e. Acura CL).

4. Once the program has finished loading it will display the available listings organized by their respective risk. To view the relevant details of each listing, click the listing in the category, and make sure it is highlighted, then click the "GET DETAILS" button.
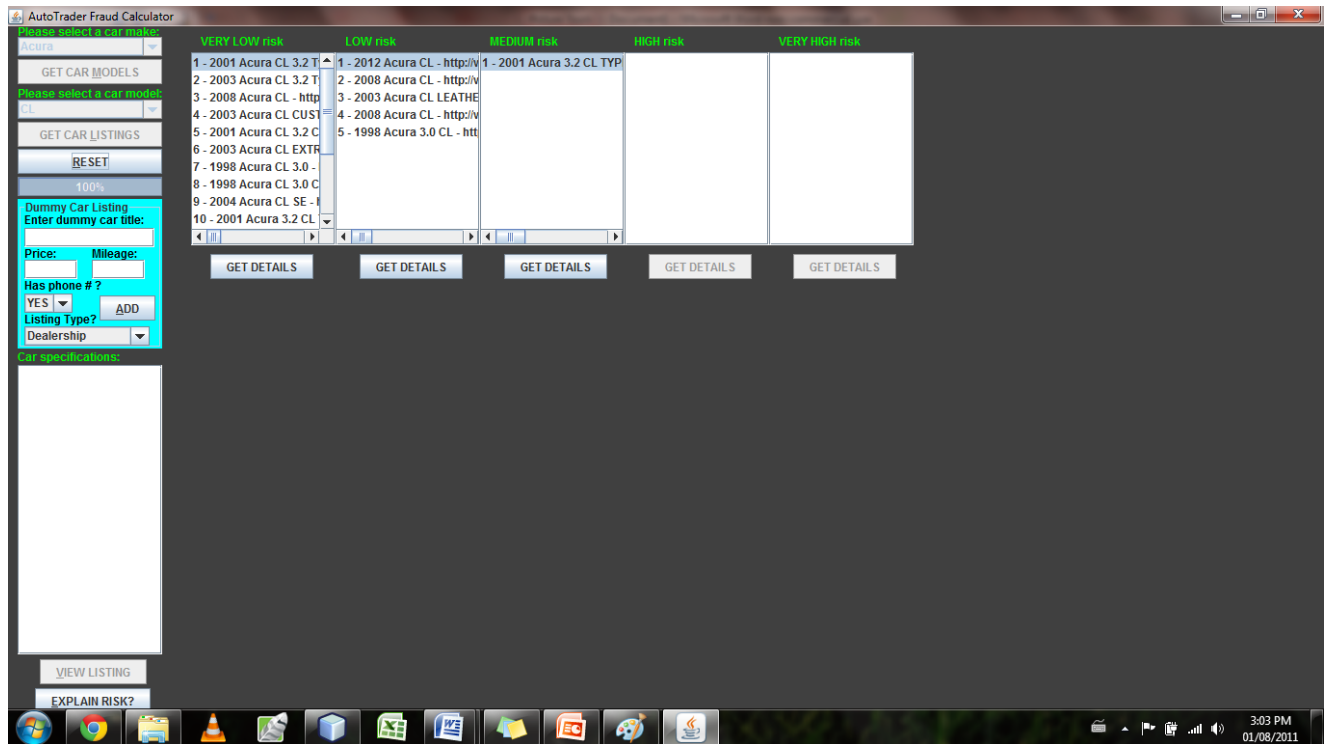
Figure 3.5 – Organized listings.

5. When you select a listing from the risk categories, and click "GET DETAILS" the GUI will display the information for the selected listing the Car Specifications panel, as well as display the information in a graph within the GUI, with your selection highlighted as a blue dot. Below the Car Specifications panel is the "VIEW LISTING" button, which opens the AutoTrader.ca listing on your browser. Below that is the "EXPLAIN RISK?" button which highlights the parameters taken into consideration when calculating the risk of the listing. Finally at the bottom of the GUI are the calculated statistics of the listings (average price and average mileage). The following Figures (3.6, 3.7, 3.8 3.9) depict the program at various stages of execution.
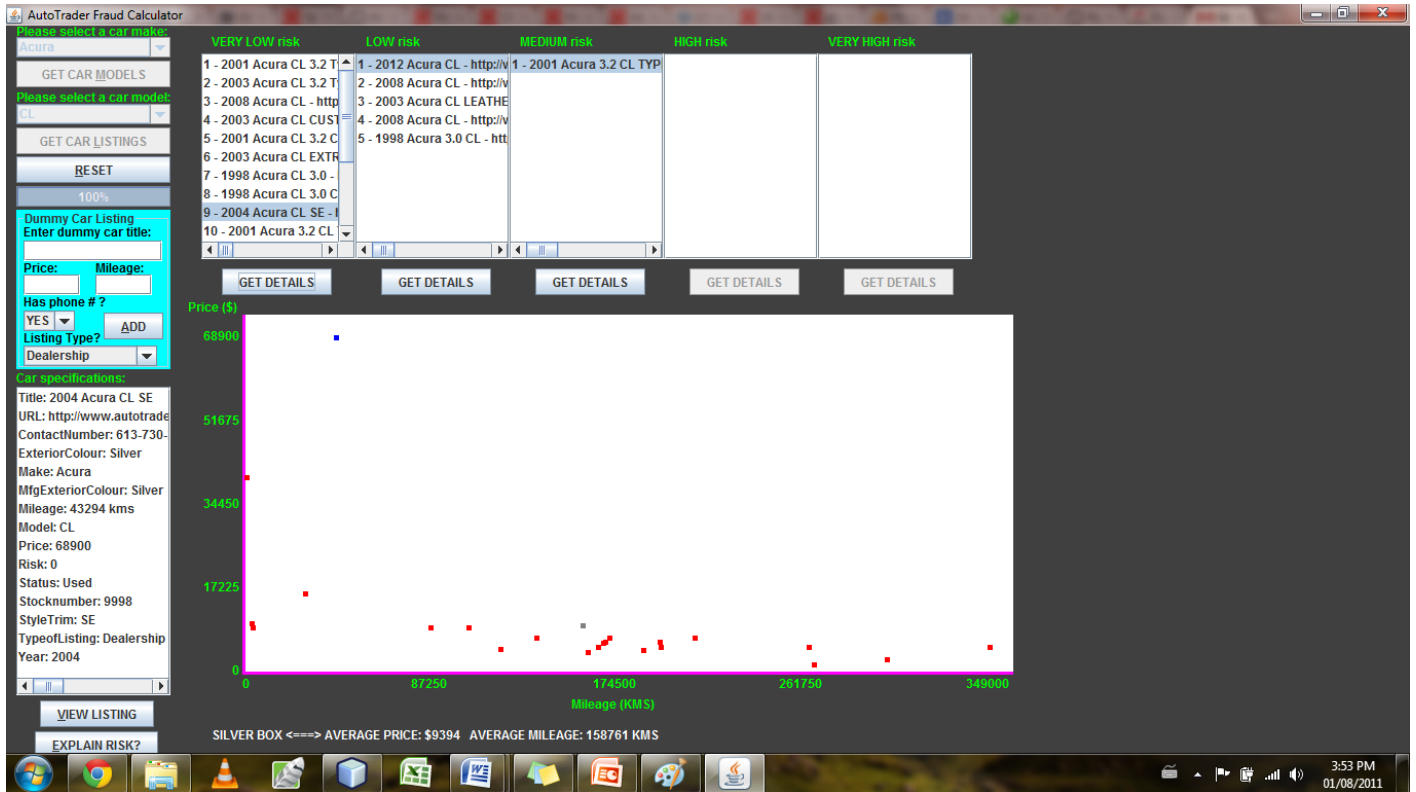
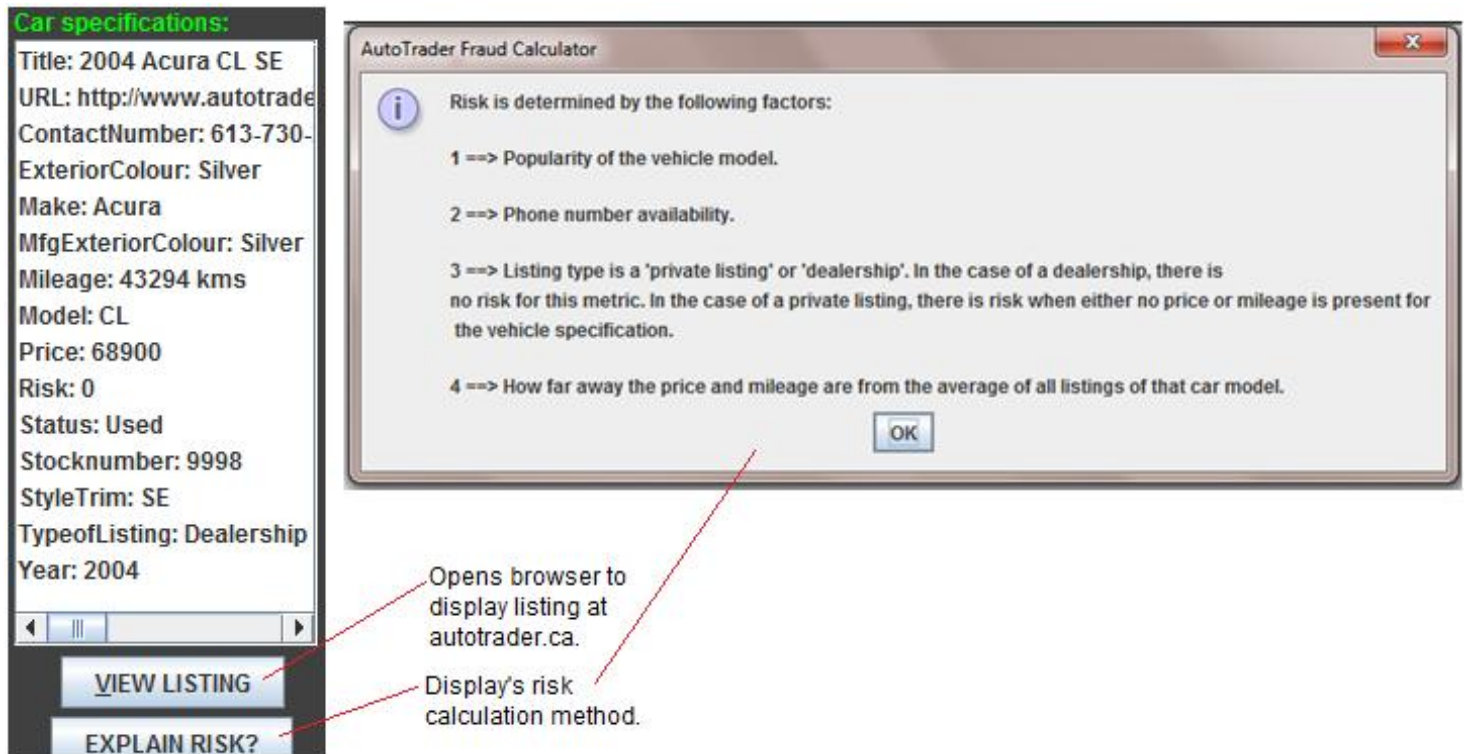Figure 3.6 – GUI Display: Description for a listing.
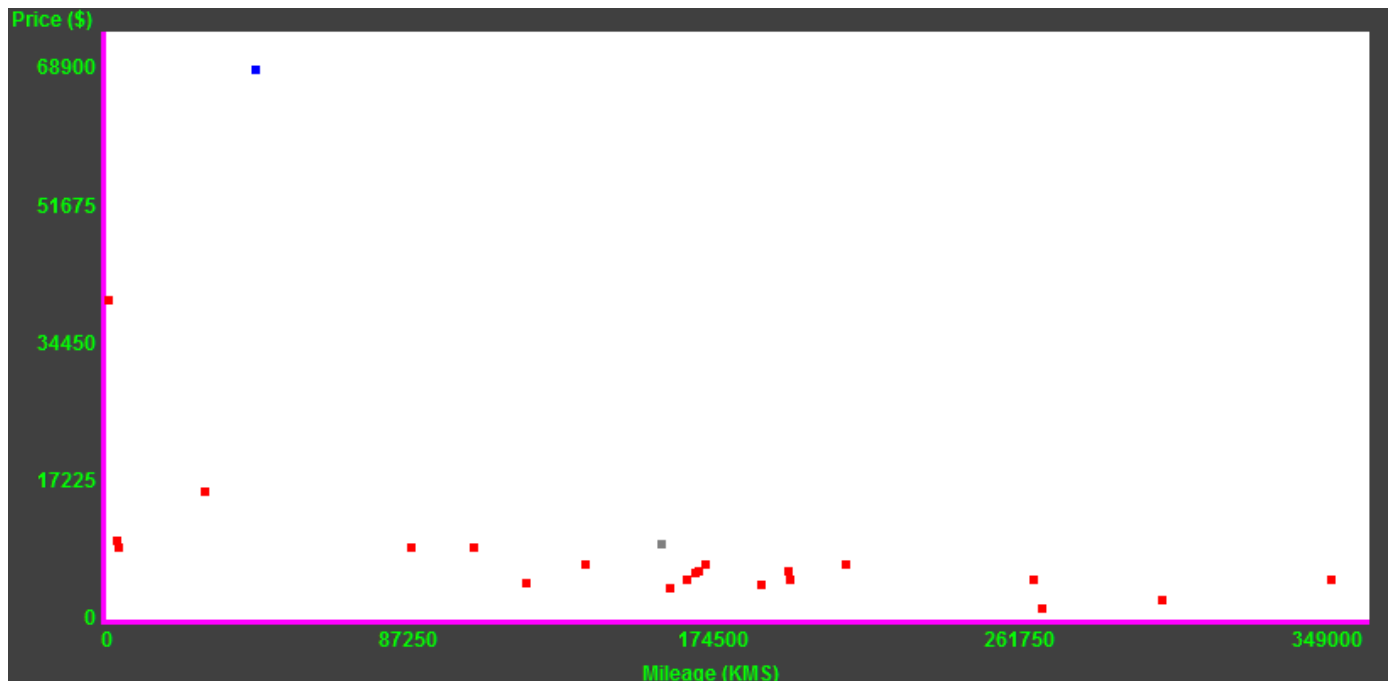

Figure 3.7 – Listing Details and Risk Explanation

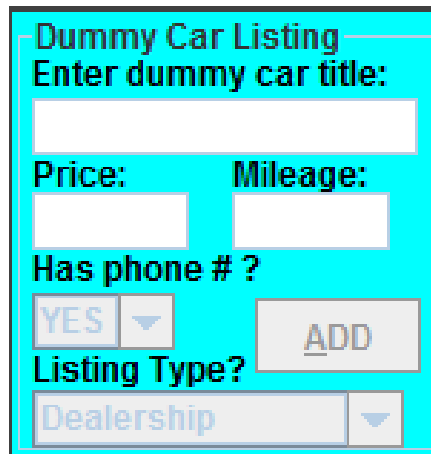Figure 3.8 – Plot Graph (Blue Dot indicates selected listing)

Figure 3.9 – Statistic listings

This ends the basic implementation of the AutoTrader Fraud Calculator, which analyzes listings for a single car model, and displays the associated risk.

Additional Features

The "Dummy Car" feature enables you to "Add a new car to this list". This new car is called a "dummy car" for two reasons: first, it does not represent any actual car, advertised at AutoTrader; and second, after the analysis, it will NOT be saved as part of persistent info of cars. After adding the dummy car, you will be able to call the Fraud Analysis feature; and the system will generate the Fraud Factor of the "dummy car" as well as other cars.

The "dummy car" panel is located in the center left side of the GUI, and contains several input fields, as depicted by Figure 3.10.
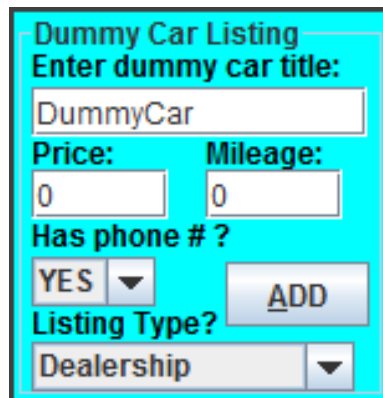

Figure 3.10 – "Dummy Car" Panel

Continuing from the example above, you can enter a dummy car entry by filling in the appropriate information in the panel and clicking the "ADD" button.

Figure 3.11 – New "Dummy Car" Entry

If all the appropriate fields are filled in correctly, the entry should be added to the car listings and processed upon which, it should be place into a risk category, as depicted in Figure 3.12.
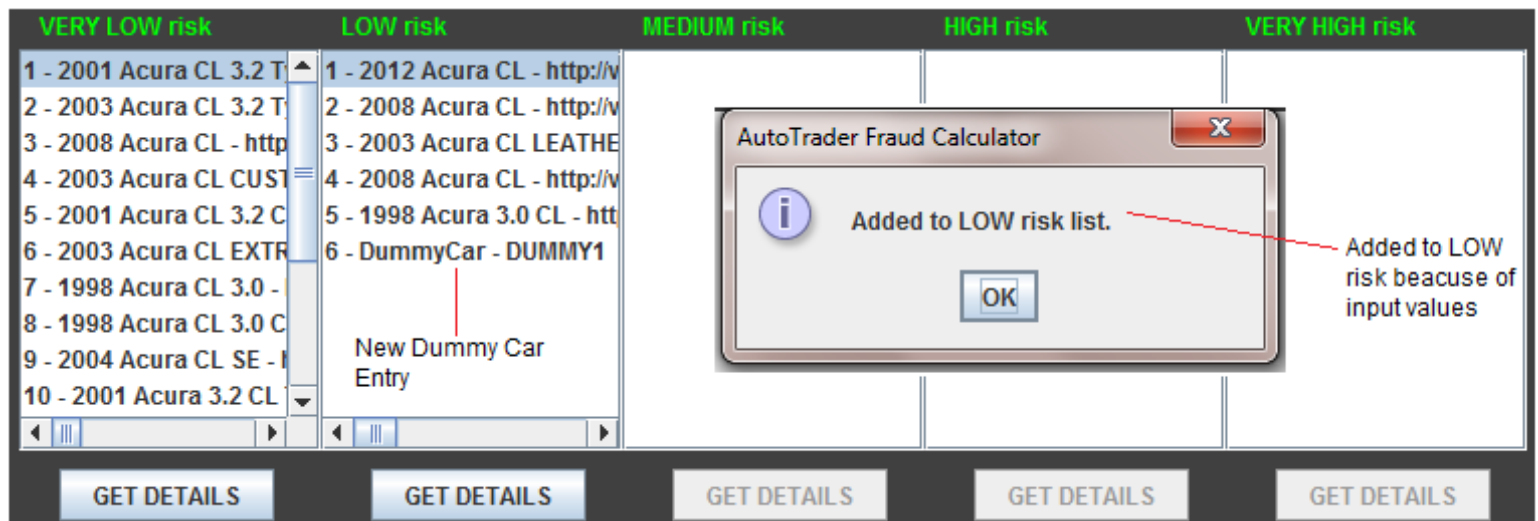
Figure 3.12 – Inserted "Dummy Car" Entry

4.   Reference

Error messages, Warnings and causes

Error messages are common tool used by programs to identify improper protocols. Although the AutoTrader Fraud Calculator is secure to internal errors, external errors may render the program unusable. Therefore, the ATFC will alert you to any problems through the following messages.

1. When the AFTC encounters connection problems, a dialogue box with a message will appear.
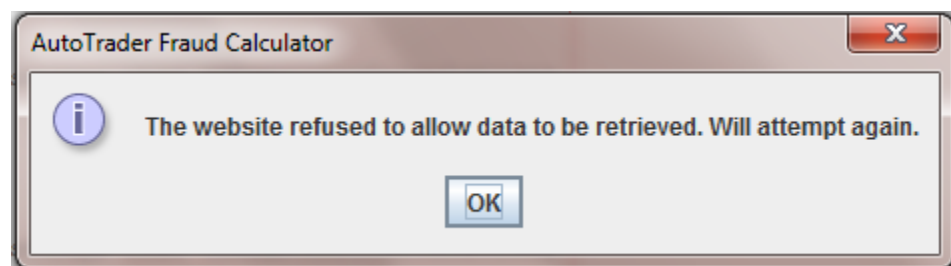

Figure 4.1 – Initial error alert

2. For a total of 5 times, the program will attempt to execute, after which it will terminate after displaying the following message.

Figure 4.2 – Final error alert

You will also be alerted by an error message if you do not enter correctly formatted data into the "Dummy Car" panel. The message is depicted in the following figure:
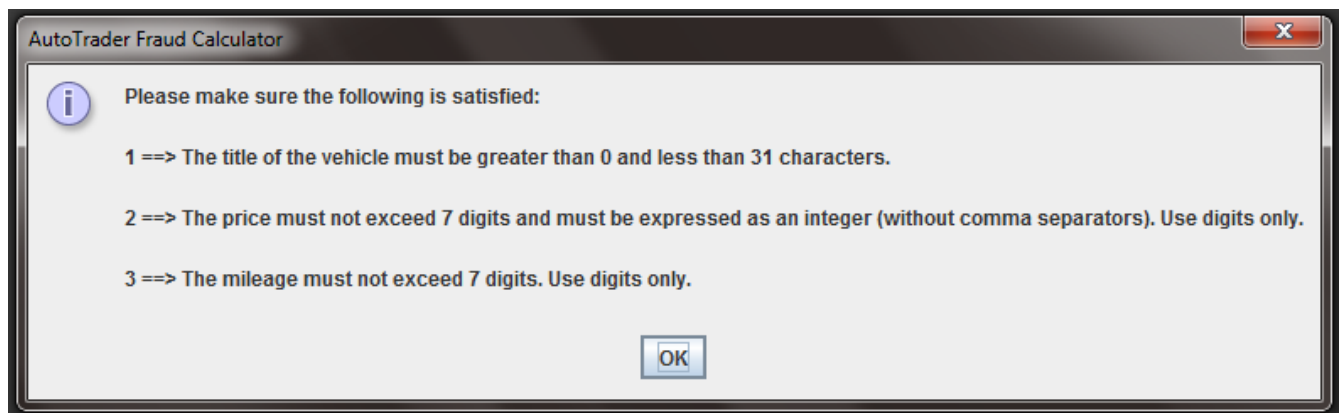

Figure 4.3 – "Dummy Car" entry error

Although not an error message, the ATFC updates the auto listings upon each calculation and you may be faced with the following prompt:
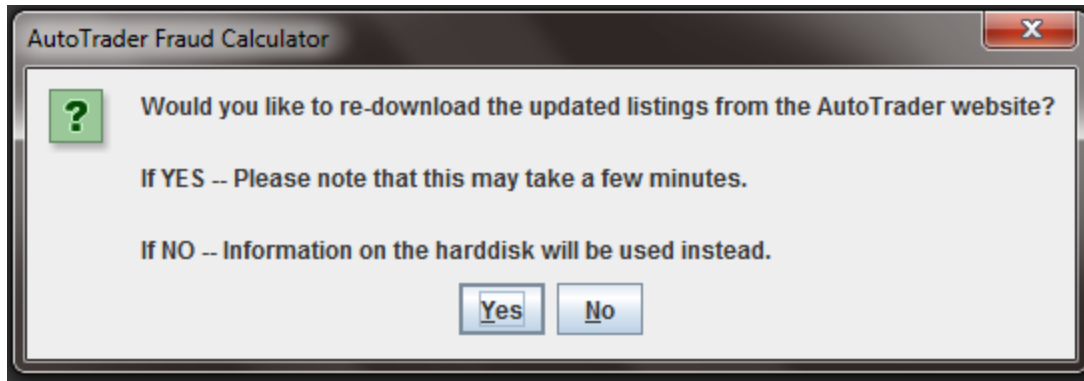
Figure 4.4 – Update prompt

It is highly advisable to click yes so the ATFC uses the most up-to-date information from the autotrader.ca server. However, if you wish to continue using listings downloaded prior then the option remains available.

F. A. Q.

1. **The ATFC keeps giving me an error message. What should I do?**

   Well, the first thing to check would be your internet connection, and restart the program. If you are able to access the internet, then try to see if autotrader.ca is online. Sometimes their servers are temporarily out of service. However, if that fails, head for the hills!

2. **I just downloaded the ATFC, and I'm getting an error message that says "Exception in thread "main" java.lang.ExceptionInInitializerError". What should I do?**

   This error occurs because you are likely using a computer running Windows (7 most likely). The fix is very simple.

   a. Click on the Projects Tab on the left side of NetBeans. You should see several red exclamations points on various source files.
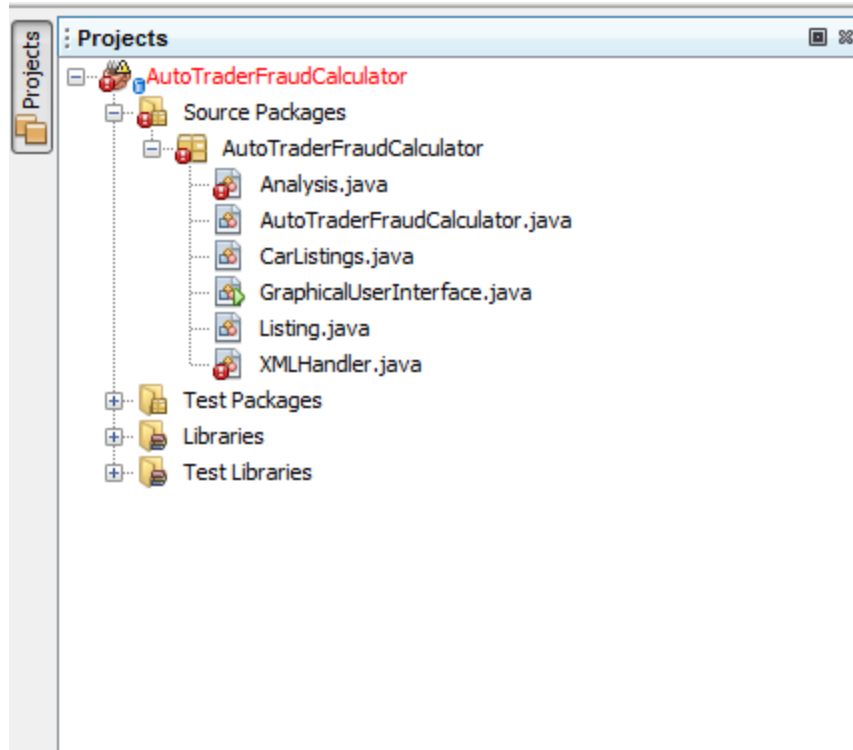
Figure 4.5 – Projects Tab on NetBeans

b. Right click on the internal Libraries tab and select "Add JAR/Folder".

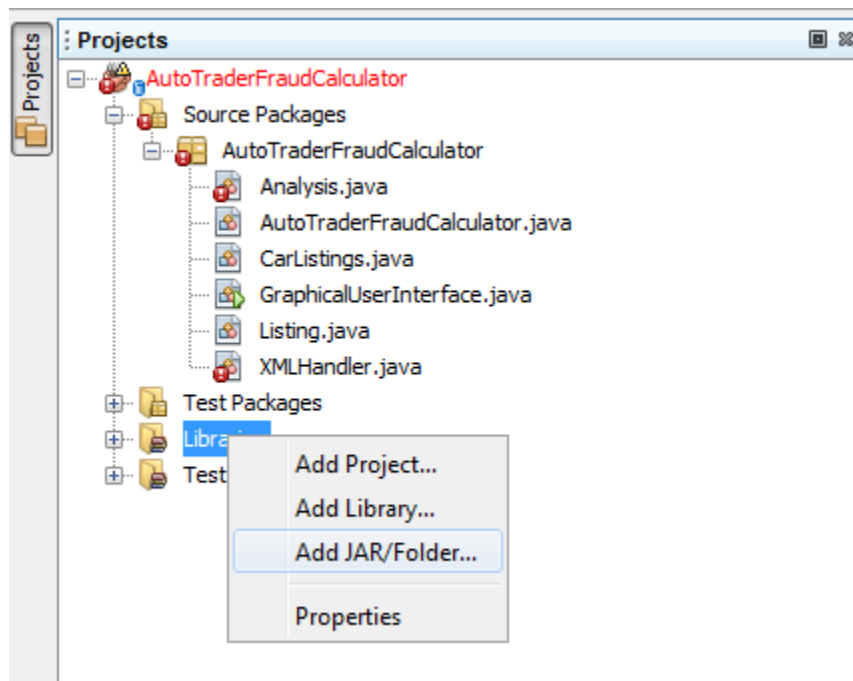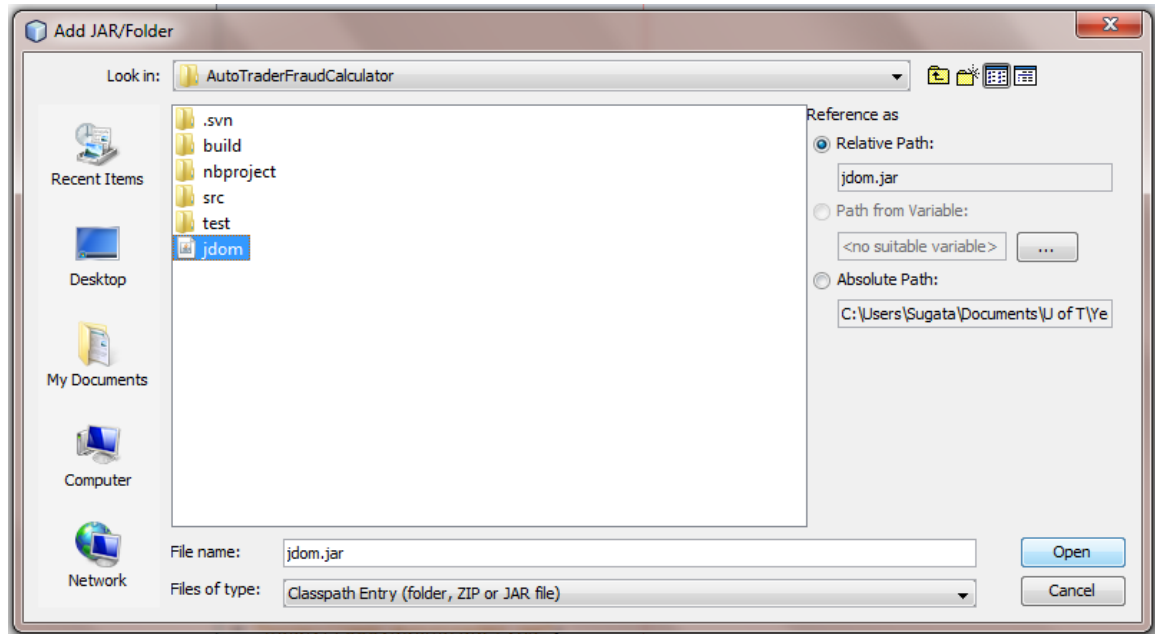
Figure 4.6 – Libraries Tab Selection

    c.   Navigate to the location where you saved the
"AutoTraderFraudCalculator" file, inside should be a JAR file called "jdom"
select it on the browser and click OPEN.

After opening it the red exclamation points should disappear and any
problems associated with the "jdom.jar" file should have been resolved.

3. **Man, I'm tired of waiting for the ATFC to load the Honda Civic listings. I want to
know NOW!**

Firstly, that's not a question and secondly it is a known fact that good things
come to those who wait, so go read a book, play a board game, or take a walk
(yes it may take that long). Just let the program do its thing.

Contact

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Appendix A - Glossary

Word	Meaning
Applet	A small application that performs one specific task.
Developer package	A collection of related classes in a program.
Dummy listing	A car listing defined by the user to be sorted into a risk category.
File (.class)	A Java source file.
File (.jar)	A container file used to distribute Java applications.
Formatted Data	Data which has been inputted in the terms a defined set of rules.
Fraud Factor	The calculated risk of a single car listing.
Parameter	One of the pieces of data provided as input.
Prompt	A symbol that appears on a monitor to indicate that the computer is ready to receive input.
Risk category	A category containing listings which fall within a predefined range of fraud factors.