1. Intoduction  
 Overview of entire SRS  
 1.1 Purpose  
 a) purpose of SRS

The purpose of this requirements document is to bring clarity to the project by indicating what the hardline requirements are for the project to be considered a success. This will be done with the consideration that the desired end product may not be achievable and as a result will be treated as a form of research project or proof of concept.

b) specify intended audience for this SRS

Intended target audience for this document is our client and by extension CDK given this is their idea and the success of the project directly assists them. In addition, our instructors and teaching assistant are extensively involved in this project and they will be using this as a grading guideline. The assumption is that the reader is familiar with general concepts within computer science including artificial intelligence, common programming languages, and coding environments.

1.2 Scope  
 a) Identify software product to be produced

The product being developed will be a variant of open source AI that will be tailored to scanning submitted forms by CDK. With the inclusion of stretch goals this platform may also analyze driver licenses, vehicle imaging, or name to vehicle identification.

b) Explain what it will and won’t do

This project will be capable of analyzing a submitted form to locate its signature box and check to see if it has been signed. It will also prompt the operator if it is not certain of what it is observing and if a cosigner box is also present. The format of these submissions will be in PDF format. Stretch goals include the capacity to detect expiration dates on driver’s licenses and determine what make and model of a vehicle is based on a submitted image. Additional file formats are also being considered.

c) Application of software: benefits, objectives, and goals

Benefits from this product include reduced costs for CDK in error checking forms, rapid validation of a document, and a singular platform that can scan the various form styles that CDK possesses. Another goal of this design is the ability for it to expand upon itself and adapt to new forms that may be introduced by permitting operator confirmation or override on its assessment.

1.3 Definitions, Acronyms, and Abbreviations  
 a) List all terms, acronyms, and abbreviations required to understand the SRS

Open source AI is a free to access platform in which the code can be used and implemented as seen fit by the operator. OpenCV is a popular image processing example of this as well as TensorFlow and DL4j. Programming languages that may be used include C++, Python, and Java. The use of an IDE is likely, which means Integrated Development Environment which provides a more convenient setup for coding. Examples of IDE’s include Microsoft Visual Studio and Eclipse. Black box design means that the user does not need to understand the internal functions of the program, just what it wants as input and what the user will receive as the output.

1.4 References  
 a) List references here

1.5 Overview  
 a) Describe what the remainder of the SRS contains

The remainder of the requirements document will contain a greater look into what precisely the project entails. This is going to involve looking at where the project stands for CDK and how it will be utilized as well as the products functions and characteristics for a user. Mention will also be made towards potential constraints placed upon the program.

b) Explain how the SRS is organized

The following section will be a general overview and description of the project, primary focus being placed on functions, characteristics, constraints, and assumptions/dependencies. After that there will be a section on specific requirements that will bring mention to potential interfacing concerns as well as performance metrics and standards compliance.

2. Overall Description  
 2.1 Product Perspective  
 a) Indicate if this product is standalone or to be integrated

The core objective as well as the stretch goals all conclude that this product will be an independent platform. For this project, we will explore the potential of A.I. and create the foundation of CDK’s own AI platform.

b) Depict how the software operates within various constraints

The signature detection and driver’s license verification software must support various personal computers such as desktop, laptop, and tablet as an input source. This software will first receive a PDF file of a document as its input. It will then compute the data and give result or feedback to user. With that in mind, the software needs to be robust enough to compute large set of data. Similarly, within our stretch goals, vehicle model detection software must also support various personal computers and be robust enough to evaluate large data. However, it must also support portable devices with camera such as phone and tablet. Software should first take photo from camera then it evaluates the photo and returns model number.

2.2 Product Functions

Main goal

The function of this software is detecting the location of the signature box and determine whether it is signed or unsigned. If document is unsigned: software must provide information of location and quantity of missing components. Also, the program must be capable of making a reasonable guess on whether a signature is sufficiently binding. This entails the AI must be capable of distinguishing between a simple mark in the signature window and an actual signature.

Stretch goal

License validation software: This software must validate whether given photo is driver’s license or not. First, it must validate the format of driver’s license and check legal information such as expiration date.

Vehicle model detection software: Vehicle model detection software must be able to determine the specific model number from appearance of the vehicle. Software will first take photos or video of vehicle taken from different angle. It will determine vehicle model by narrowing down the information. For example, software will search sequentially for make, model, and year.

2.3 User Characteristics

The main user of the software is vehicle retailer. We can assume a low degree of understanding on artificial intelligence. Therefore, software must be designed as black box model. To accompany this structure the user interface must be agreeable for them. Lastly, the program must not overburden the operator, it will take a single file as input to scan and return a conclusion to the user.  
 2.4 Constraints

2.5 Assumptions and Dependencies  
3. Specific Requirements  
  
Appendix  
  
Index