**University of Electronic Science and Technology of China**

**School of Information and Software Engineering**

**Experiment Report**

Student ID：

Student Name：

Course Name： Python Practical Programming

Experimental Teacher： Rao Yunbo

1. Experiment title： Semantic segmentation

2. Experiment hours：4h Experiment location: Software Building 400

3. Objectives

At the end of this experiment, you will be able to:

* How to use Jupyter for SAM.
* How to use classification confusion matrix.

4.Experiemental contents & step

(1)Exercise 1: Triple classification confusion matrix

(2)Exercise 2: Use SegmentationMetric.py to calculate evaluation metrics

(3)Exercise 3: Semantic segmentation of football

(4)Exercise 4: Using the SAM model for image segmentation

(5)Exercise 5: Installing and configuring the SAM environment

(6)Exercise 6: Using SAM atuo generate image mask

(7)Exercise 7: Using prompts to choose objects

(8)Exercise 8: Specify a specific goal through additional points

(9)Exercise 9: Specify an object through a box

(10)Exercise 10: Combining points and boxes

(11)Exercise 11: Batch prompts input

(12)Exercise 12: End to end batch processing

Please show experimental results and pictures in your report.

For example:

**<1>Installing the JDK for Windows**

**Step 1:** Find a folder named JDK, and inside that folder you will find an executable file with the following name: *jdk-6uXX-windows-i586-p.exe*

The *XX* in the filename will be the software’s update number. For example, if the CD contains update 10, the *XX* in the filename will be jdk-6u10-windows-i586-p.exe. This file is an executable program that will install the Java™ 6 JDK for Windows on your computer. Run the file.

**Step 2:** A license agreement screen, such as the one shown in Figure will appear next. Read the agreement, then click the *Accept* button.

**Step 3:** A Custom Setup screen, such as shown in Fig.1, appears next. Make sure *Development Tools* is selected. Also, notice that at the bottom of the window you see the words “Install to:” followed by the path C:\Program Files\Java\jdk1.6.0\_XX. (The “XX” will be a number.) This is the location where the fi les will be installed. Click the *Next* button.



Fig.1 Custom Setup screen

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5. Experimental analysis

Report score：

Instructor's signature：