



# Personal Photo Enhancement via Saliency Driven Color Transfer

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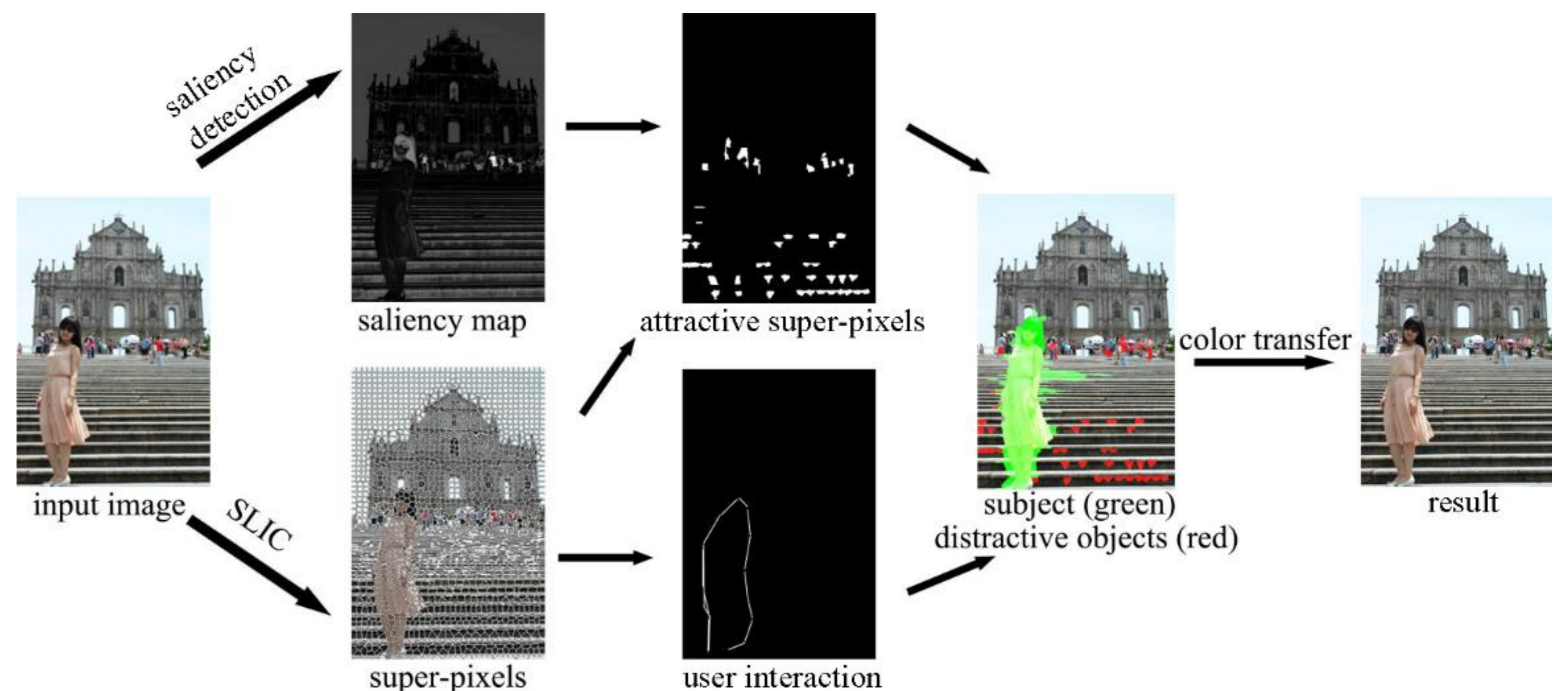
## Introduction

Personal photos on tour are easily affected by **distractive objects**, which requires effective post-processing for **subject enhancement**.

- **Manually editing by Photoshop:** requires professional skills; time consuming.
- **Image inpainting & image retargeting:** easily bring in artifacts.
- **Color transfer:** requires suitable reference images or well-defined operations.

## Method

We propose a novel personal photo enhancement method using **saliency driven color transfer**, which can effectively reduce the attraction of distractive objects with simple user interaction.



- **SLIC:** represent photo with super-pixels
- **Saliency Detection:** detect potential distractive objects; guide color transfer.
- **User Interaction:** annotate subject(s) by drawing a curve around each subject
- **Saliency-Driven Color Transfer:** transfer color according to average colors of surrounding super-pixels

## Experiment



### User study

	PS	IP	SC	Our
good	33	17	15	30
acceptable	56	45	52	53
bad	1	28	23	7

### Average running time

	PS	IP	SC	Our
Language	-	Matlab	C++	Matlab
Time	25min	44.53s	2.57s	2.09s

- Our method achieve similar effectiveness to PS and obviously outperforms the other two semi-automatic methods for bringing in less artifacts.
- Our method is obviously faster than PS and IP and slightly faster than SC.

