



# Introduction to Computer Vision with Python

Rohan Gautam



# About me

- Majoring in Data Science and AI
- Programming and hackathon enthusiast



# Workshop flow

**01**

## **Why computer vision?**

What is computer vision and why learn it

**02**

## **Setting up an environment**

**03**

## **Libraries we'll use**

Here you could describe the topic of the section

**04**

## **Image basics and Image processing**

**05**

## **Mini project!**

Writing code to count coins from an image using just computer vision

**06**

## **Moving forward, Q&A**

# Socials



- @RohanGautam



- <https://www.linkedin.com/in/rohangautam/>



- rohan011@e.ntu.edu.sg

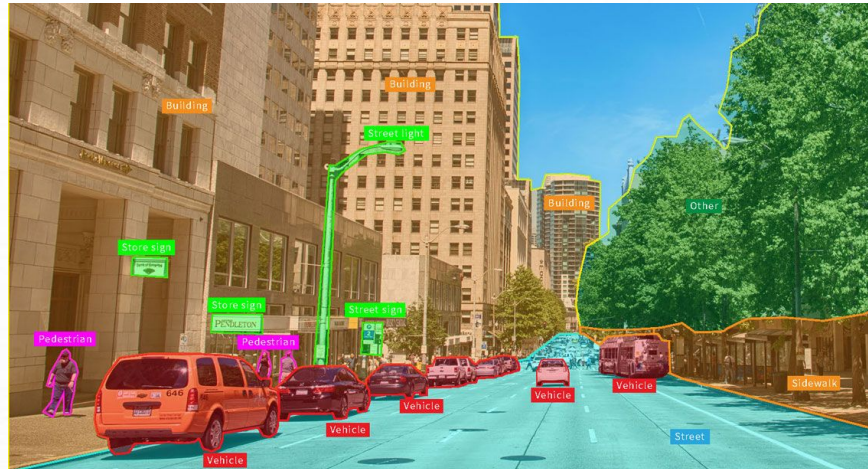
The background features a large, irregular watercolor splash in shades of light orange and peach, centered behind the text. Below this, there are lighter blue and greyish-blue washes. Scattered throughout the composition are numerous small, solid brown dots of varying sizes. A thin, dark brown line starts from the top right, curves around the central text, and ends in a series of loops at the bottom right.

# 01

**Why computer  
vision?**

# What is computer vision

- Computers gaining high-level understanding from digital images and video
- Understand and automate tasks we can do with our vision system
- Broad interdisciplinary field





# Why computer vision


- **Helps machines and robots make sense of the world around them**
- **Essential for a lot of the systems we use every day**
  - **Google lens**
  - **Face unlock**
  - **Self Driving cars**

# 02

## Setting up an environment







06

**Moving forward**

# Areas you can further explore

- The in-notebook exercises included
- Check out [this tutorial](#) on face detection using opencv!
- [Deep learning with pytorch](#) to learn foundational AI and work on a project involving medical CT scans!

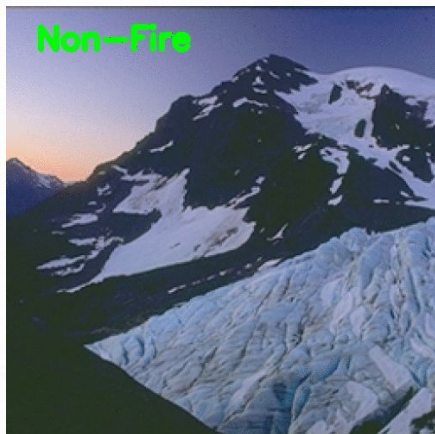
# Cool projects


- Neural style transfer ([article and demo on colab](#))



# Cool projects

- Fire and smoke detection - computer vision and deep learning ([article and tutorial](#))



The background features a large, irregular watercolor wash in shades of light orange and peach, centered behind the text. Below this, there are lighter blue and greyish-blue washes. Scattered throughout the background are numerous small, brown dots of varying sizes. A thin, brown, hand-drawn line curves from the top right, loops around the right side of the text, and ends in a small, stylized loop at the bottom right.

# **Closing address and Q&A**

# Feedback!



<https://forms.gle/RcXZQ4cGXbmMDBXj8>