

מועמדים יקרים!

כפי שצוין בכנס המועמדים, עליכם למלא את המטלה (לבחור 1 מתוך ה 3 הקיימות) ולהגישה בצירוף קורות חיים בקישור שיופיע בהמשך, עד לתאריך 19.3 בשעה 23:59.

לאחר ההגשה מועמדים מתאימים יזמנו לראיון אישי.

קישור להגשה: <https://forms.gle/wstoFiyCchYRnqnw5>

**** שימו לב שאת ההגשה ניתן לבצע דרך חשבון המייל של אוניברסיטת בן גוריון בלבד****

לשאלות נוספות ניתן לפנות אלינו לכתובת המייל: bgracing@post.bgu.ac.il

המשימות מנוסחות בלשון זכר מטעמי נוחות אך מתייחסות כמובן לשני המינים !

בהצלחה!

Software Assignment 1: Face Recognition

Face detection is among the most popular computer vision project ideas. It has applications in many areas, security, social media, healthcare, etc. Face detection is a considerable section of computer vision. You can use Python or OpenCV libraries.

Task:

- Use your own images or videos to perform face recognition.
- Calculate success rate of your correct face recognition, and false alarm.
- You can use this reference (or any other for your choice):
<https://pypi.org/project/face-recognition/>
- Do you think this can be used for road cones recognition:



Please submit (in the google forms) a zip file that includes:

- Your code.
- Your results (in word document).
- Any other resource that shows your work (optional).

Software Assignment 2: Traffic Signs Recognition

You must have heard about the self-driving cars in which the passenger can fully depend on the car for traveling. But to achieve level 5 autonomous, it is necessary for vehicles to understand and follow all traffic rules.

In the world of Artificial Intelligence and advancement in technologies, many researchers and big companies like Tesla, Uber, Google, Mercedes-Benz, Toyota, Ford, Audi, etc are working on autonomous vehicles and self-driving cars. So, for achieving accuracy in this technology, the vehicles should be able to interpret traffic signs and make decisions accordingly.

- Use Python or OpenCV to build Traffic Signs Recognition.
- Recognize: stop sign



- You can use:
<https://data-flair.training/blogs/python-project-traffic-signs-recognition/>

Please submit (in the google forms) a zip file that includes:

- Your code.
- Your results (in word document).
- Any other resource that shows your work (optional)

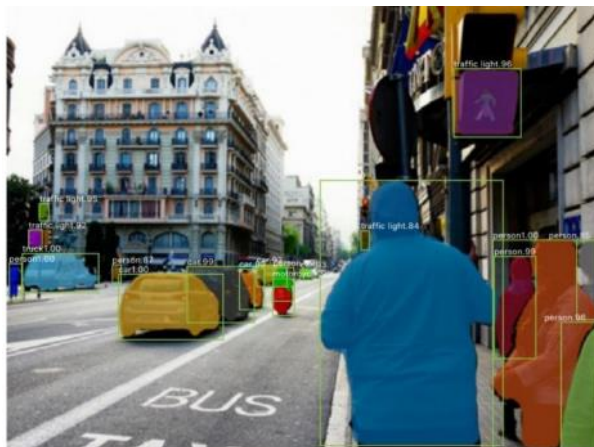
Software Assignment 3: Image segmentation

You might have wondered how fast and efficiently our brain is trained to identify and classify what our eyes perceive. Somehow our brain is trained in a way to analyze everything at a granular level. This helps us distinguish an apple from a bunch of oranges.

Computer vision is a field of computer science that enables computers to identify and process objects in videos and images just the way we humans do. Although computer vision might seem like not a very old concept, it dates back to the late 1960s when the first digital image scanner which transformed images into grids of numbers was invented.

- Upload your own image or an image you find online with a car on it and perform image segmentation.
- Demonstrate how you obtain the car segment.
- You can use:

<https://data-flair.training/blogs/image-segmentation-machine-learning/>



Please submit (in the google forms) a zip file that includes:

- Your code.
- Your results (in word document).
- Any other resource that shows your work (optional).

Good luck!!