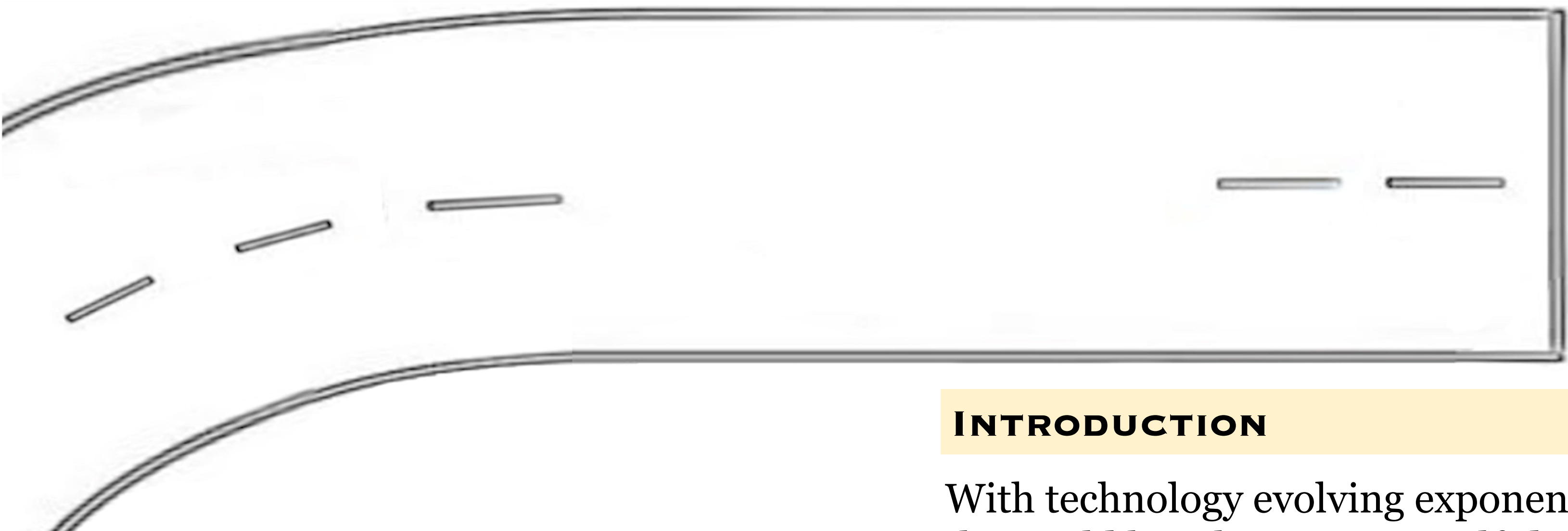


AUTONOMOUS DRIVING SYSTEM

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אוניברסיטת
אריאל
בשומרון



CONTRIBUTIONS/GOALS

We are developing an autonomous driving system (in a simulator car).
that its purpose is assuring a safe and efficient drive and a trip for the user.

METHODS

we will be testing the project in a simulator system that is providing us the data that contains all the information from the streets around, using an (AIKIT camera) that has been specifically developed and programmed for these types of measurements.
The camera can detect:
moving cars, street bumps, holes in the street, pedestrians, footpaths, etc.
our code receives all this collected information and then adjusts the vehicle to drive accordingly.

SOLUTION DESCRIPTION

- Our vehicle will be going on a circular path that also contains other autonomous vehicles.
- we will be conducting a race between all the vehicles.
- our number 1 goal is that our vehicle receives the highest ratings of them all.

ratings are based on:
driving safely and calmly, the fastest trip, and driving according to traffic laws.

INTRODUCTION

With technology evolving exponentially day by day, the world has their eyes on self-driving vehicles or **autonomous vehicles**.
The most important component for achieving an autonomous driving system is a reliable tool that consists of a specified developed camera that is able of scanning all the environment around our vehicle and according to its measurements we'll be developing a program that will be able to give us an accurate indication for any type of an accident that will may be occurring thus, preventing it by giving the exact right command to our controlled vehicle.

SELECTED APPROACH

Our best component is the lane following controller which is a fundamental component in highway lane following applications.
this component can give us the exact time and way we'll be able to attempt an overtake. The lane following controller generates the steering angle and acceleration control commands for an ego vehicle by using lane and vehicle information along with a set speed.

