HGV2 - Koala AI

Project Number:
Maximum number of groups can accept: 8
Industry Partner: Ben Sand and High-Growth Ventures (HGV)
Location of Partner: Online/Remote
URL for Partner: NA
Contact Person:

Name: Ben Sand
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Project Title: AI for locating and counting koalas in the wild

Project Description and Outline:

AI research and development are the fastest and biggest growth areas in the technology field. We are building the next big AI data processing technologies locally in Australia.

The goal is to develop a solution to accurately and efficiently estimate koala populations using computer vision through neural networks. This is critical in doubling the numbers of this threatened species in NSW by 2050.

You will be researching and developing the latest state-of-the-art technologies to build a neural network that detects koalas in the wild to help with conservation efforts. There will also be a possible opportunity to work with drones to deploy your network in real time for strong and motivated teams.

This project will be run as a competition between other students. We are looking for the best solution(s) to the problem.

A strong outcome will provide you:

- the potential for summer, part time or full-time work
- an excellent piece of portfolio in one of the most valuable AI areas
- critical skills to advance your academic and industry career
- possible funding for the project

HGV has a 10 year history with capstone projects at the University of Sydney. You will work directly with HGV's founder, Ben Sand. Ben has supported 600 roles for engineers in Australia and USA, and more than 100 founders of technology companies to earn over $350M in funding and sales.

Expected outcomes / deliverables:

The goal of this project is to build a working prototype of a deep neural network to meet the scenario above.

Students will have the freedom to direct this project in a direction that best suits their team's experience and interests, whilst being guided by a full-time project manager to maximise their potential.

Participation in this project requires an intellectual property agreement which establishes your rights for academic and research purposes and assigns commercialisation rights.

Specific requirements/Skills:

This project is for students who want a serious real-world industry experience. They will need to be self-motivated and goal focused, with a strong Python background and an interest in AI. Experience in working with AI, deep neural networks, image processing or big data is preferred but not required.

For more experienced teams, students should already be familiar with TensorFlow/Keras, Python and Gazebo.

General field/discipline: AI, Deep Neural Networks, Image Processing, Big Data

Resources:
Koala Count Challenge

Udacity Course: Intro to TensorFlow for Deep Learning