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РАЗРАБОТКА ПЛАТФОРМЫ ДЛЯ СОЗДАНИЯ ЦИФРОВОГО ПРОФИЛЯ ПОСЕТИТЕЛЕЙ НА ОСНОВЕ ИЗОБРАЖЕНИЙ ЛИЦ

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Ключевые слова: цифровой профиль, распознавание образов, сверточные нейронные сети

Цифровой профиль — это совокупность цифровых записей о физических лицах, которые включает в себя: пол, возраст, эмоции и уникальную информацию для идентификации человека.

Разработанный программный комплекс состоит из следующих компонентов:

- Локализация лиц с помощью CPU, реализующий алгоритм HOG.
- Локализация лиц с помощью GPU, на основе сверточной нейронной сети с функцией потерь MMOD.
- Извлечение уникальных признаков человека, на основе сверточной нейронной сети Reset34.
- Оценка эмоций человека, на основе сверточной нейронной сети miniXception.
- Определения пола и возраста человека, на основе сверточной нейронной сети WideResNet.
- Классификации уникальных признаков человека, реализующая метод k-ближайших соседей.

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MOVE OVER, DRIVERS: THE REAL STAR OF FORMULA 1 IS COMPUTER DATA

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Ключевые слова: formula one, virtual reality, neural network

The goal of this research was to show that nowadays Formula One is as much about speed as it is about technology. A savvy driver can make some meaningful in-the-moment adjustments around brake bias and engine mapping in order to gain speed and get ahead, but the major improvements happen off the racetrack as a result of data analysis. At the highest levels of the sport, human drivers perform so similarly that the biggest remaining room for improvement is

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in the cars themselves. Computer-captured data in Formula One informs all the major decisions that teams sweat about: when to adjust the car's wings or change their size, adjusting tires, changing tire pressure or compound, or tweaking one of the many aspects of the suspension, from rake and ride height to sway bars and stiffness. Everything pertaining to the car's performance that can be tracked and measured by computers is tracked and measured by computers. The things a human driver pays attention to in the car are minimal by comparison to what computers are collecting.

Firstly, I have sink my teeth into the brief story of computing in Formula One. To figure out everything about the usage of computers in «F1» field I have explored some milestones about every decade from the 1950s to the 2010s and present day. Secondly, I have got acquainted with some forecasts about the future of computer applications in Formula 1. All these issues are very deeply covered by many of the largest Formula 1 teams, such as McLaren, Mercedes, Renault and so on. Through out my whole research I rely on the surveys of the first two.

Eventually, I have come to the next point: The use of computers in Formula 1 has changed the face of the sport and contributed immeasurably to the engineering process of building fast cars. It continues to allow teams to push the boundaries of simulation, development and analysis technology, and go racing with well set-up and optimized cars at the beginning of race weekends. As Formula 1 evolves, its use of computers and software continues at the rapid pace required to support the ever-changing design and engineering challenges. In addition, it is quite obvious that there is a room to grow in terms of the audience's impressions. The usage of virtual reality technologies will enhance the quality of the delivery of content and viewers will get the opportunity to see more. Furthermore, I have found out that the neural networks using during the race has started out recently. This concept predicts the action of a driver and foresee the result of a whole race according to many facts about rider behavior: how fast he is, how accurate he controls the car, et cetera. In long run, this is just a beginning of F1 analytics and streaming of reces.

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ИСТОРИОГРАФИЯ ДЕФИЦИТА В СССР В 1980-е

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Ключевые слова: историография, дефицит, перестройка

Проблема дефицита товаров в СССР в 1980-е годы активно обсуждается в литературе. Авторы рассматривают проблему с разных

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