**FB – Novel Automated Large-Scale Image Processing System to accelerate the launch of AR/VR products and services for $400B Tech Giant**

**Business Challenge:**

* Our client – A fortune 50 social media giant intended to roll out AR/VR services for its 2.9 billion user bases
* The existing tools and algorithms available in the market for feature extraction (image processing) couldn’t handle the large volume of image datasets (100M+) that needed to be processed in near real-time and hence this resulted in significant delays in the rollout of AR/VR services

**Business Requirements:**

* With a 2.9 billion user base our client needed a Data Scientist to design a novel method to enable large-scale image processing that could accelerate the roll out of AR/VR services

**Our Approach & Solution:**

* Creospan provided a Data Scientist with significant experience in this space to solve this challenge for our client
* **We adopted the following approach for this client**
  + Conduct consultative sessions & understand the needs of our client
  + Understand the user base, technical and business constraints
  + Analyze existing tools and frameworks available for image processing and develop novel methods to enable large-scale image processing
  + Test this method and ensure it meets both the technical and business criteria of our client
  + Launch this solution in an iterative manner
* **Solution**
  + Over a period of 12 months, we developed a novel method of automated image processing that’s capable of handling 100M+ images and extracting features in near real-time
  + This method enables rapid extraction of features such as location and position of object in an image and thus scales the AR/VR development effort
  + This method accelerated prototyping & testing of newly developed AR/VR products and services by 10+ technology teams of our client that are yet to be launched in the market
  + In addition to this, we received a request from our client to patent this technology, which we gladly accepted and assisted by providing literature and illustrations for the patenting process

**Business Benefits**

* **Accelerated launch of AR/VR products and services**
  + The newly launched novel method for large-scale image processing significantly accelerated (32%) the pace at which the client was able to prototype and test newly developed AR/VR devices and services
* **AR/VR Product Development Scalability**
  + This method enables rapid extraction of features such as location and position of object in an image from large image datasets (100M+) and thus significantly scales the AR/VR development effort of our client
* **Cost Savings**
  + Accelerated launch of AR/VR devices enabled by this novel method resulted in 22% reduction in costs associated with prototyping, testing and launch of new AR/VR devices and services
* **Enabling Business Expansion** 
  + This novel method serves as a foundation for the development of AR/VR/ML products that the client plans to prototype and launch in the coming future
  + Our client is now able to significantly scale the prototyping and launch effort of novel AR/VR services across the world for its $2.9 Billion users thereby enabling business expansion in different regions

**Technology Stack:**

* Python, Statistics, Machine Learning
* Packages: NumPy, Scikit Learn, Pandas

**Consultant interviewed for this case study: Kundan Chaudhary (FB)**

**\*\* Note the numbers mentioned in this case study are estimates since we don’t have access to real numbers**