

ML-Based Age Progression Application

Leading Biopharmaceutical Manufacturing Company

Business Problems

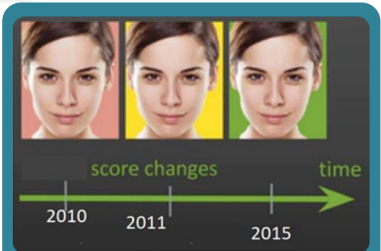
Build an **ML-based** consumer grade **wrinkle detection and age progression application**

The application should identify **subtle cracks in skin texture** caused by wrinkles for **various age groups** and **skin tone** based on the **algorithm**

The application should ensure **high quality care** for patients and assist clinicians with **remote clinical trial consultations**

Solution(s) & Value Delivered

- ▶ Built a **benchmarked algorithm** based on **ML/DL models** to localize subtle discontinuities in skin texture
- ▶ Developed a **prediction algorithm (Gabor Filter Algorithm)** followed by **Triple-GAN**
- ▶ Simulated **botox treatment** effect by **smoothing wrinkles in 2D and 3D**
- ▶ Developed an **ML-based face morphing** and age progression application
- ▶ Deployed an **integrated solution** for a **clinical decision support service** based on the **mobile application**



2D & 3D

botox treatment by smoothing wrinkles

90%

accuracy achieved for wrinkle detection

60+

unique images classified wrinkles in 4 classes

60%

intersection over union