<https://github.com/pulkitjuneja/EVA-Emotion-Driven-Virtual-Agent>

**EVA - Emotion-driven Virtual Agent (3D Chatbot Head)**

Project description

(Final Year Project) EVA is a blender based Virtual assistant developed in Python. It is a Generative Chatbot that has been given a visual interface by means of basic expressive speech-driven facial animation.   
It is capable of displaying emotion during conversation and generating answers without individually identifying intent and entities by using Word2Vec to and a Generative Deep Learning Architecture.

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**StressMobile**

Project description

Prototyped an android application in the area of eHealth  
Submitted a prototype development application for the use case of stress sensing using voice analysis.  
Won preliminary round and preparing to develop the application for the next round.  
Skills: Android Application Development

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**Churn Analysis**

Project description

Analysed the drivers of Churn, identify customers likely to churn, recommend incentives for retention using Cohort Analysis and Binary Logistic Regression Model to determine churn likelihood for a Telecommunication Client case study.

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**Analysis of air pollution levels in Bangalore.**

Project description

With data from Karnataka State Pollution board, an estimate of toxicity levels with recommendations as to where and which trees to plant in Bangalore, is being provided as an API.  
Flask for web development and Python ML libraries for the data analysis.

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**What makes an image popular on social media?**

Project description

In the past few years, there have been rapid changes and advances in online communications giving rise to image based social networks such as Flickr and Instagram. Everyday millions of images are uploaded online, which say a zillion different things. Some become popular, some don’t! We are trying to predict image popularity based on social, emotional, geographical cues and image content. We are performing linguistic, geospatial, probabilistic and statistical analysis on a dataset of around 20 million Flickr images.

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**A game theory based resource scheduling model for cost reduction in home health care**

Project description

We focus on a setting where a group of independent health care practitioners need to be assigned to home visits within a time window.An iterative bidding framework is proposed as a decentralized decision making tool to enable automated negotiation between the home health agency and the practitioner agents. The effectiveness of the framework is evaluated through a computational study. The results show that the proposed framework computes high quality schedules in the decentralized home health care environment.

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**Capture**

Project description

Capture Dashboard using R/R Shiny and Amazon AWS (S3, EC-2 & EMR) – which helps identify trends across industry based on first party advertiser data alongside real time Predictive modelling on the Data utilising KPROTO algorithm for user segmentation and GLM model for Variable Importance.

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**FollowApp**

Project description

FollowApp is an automated vaccination reminder system, developed for an NGO. It schedules automated calls to parents and guardians about pending vaccinations for their children, and establishes a feedback loop which is missing from most other similar solutions.   
  
FollowApp was the winning project in Technophilia 2016, an annual project competition within Morgan Stanley.  
  
It was also featured in the annual Tech Expo 2016, in Morgan Stanley.It subsequently won best technology at one of the expos.  
  
Developed using Java, Spring and Angular JS.

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**Predicting Student Performance Using Machine Learning**

Project description

A neural-network based machine learning application that analyzes historical data sets in order to predict the performance of a student based on his past performance. Accuracy levels as high as 70%.

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• Created a GLM model on Kerala Senior Secondary School Government Data to uncover insights and suggest changes to existing education system.

• Analysed data for a digital advertiser for outlier detection and predicting sales volumes using EXPONENTIAL SMOOTHENING and ARIMA based modelling techniques.

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Ego network analysis - to characterize the relationships that occur between writers and readers of fanfiction and illuminate the structural differences between social networks and distributed mentoring using clustering K-means algorithm; and

Visual Analytics - Developed dynamic and interactive visualizations demonstrating distributed mentorship and statistical overview of FanFiction.net website based on the 3TB data scrapped from the website.

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**Virtual Dressing Room**

Project description

Devised a realistic 3D - virtual dressing room with minimal calibration, including features like Intuitive gesture controlled user interface, Cloud database technology, 2D/3D product models, immersive product catalog and environment, and real-time cloth physics, using 3D Skeleton tracking derived from Microsoft Kinect (Depth Sensor Camera)

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Visualizing Ad metrics: Worked on building web based dashboards for visualizing advertising metrics such add spends, ad-views, ROI, and awareness uplift. Tech stack: (React, Redux and nodeJS ecosystem).

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