BED I - BTrox: the world´s first virtual boss

Work type: Start-up campaign,
System Design.

Abstract

BTrox will be the world's first Intelligent Virtual Boss. The system will reproduce in human beings what the Ophiocordyceps unilateralis fungus does with ants. It will measure the user's behavior patterns to accurately predict their needs and trends. It will then progressively take control of all of his life decisions. The project consists of a path of implementation for such a system as a fake startup campaign whose purpose is to bring into question how much control of our lives we are willing to give over to artificial intelligence systems. Three main levels of interaction with the system will be conceptualized: ADM (Assisted Decision Making), CFT (Control Fine-Tune) and FLC (Full Life Control). In its final stage, BTrox will acquire the form of a mobile application, a smart speakerand an architectural attachment.

Keywords

Smart boss, Control loss, Speculative interface

Introduction

[**0001**] One of the most frustrating characteristics of current smart devices is their inability to take relevant decisions on their own, since they are completely dependent on the user's feedback. In the case of automated life coaches, there is also the problem of domain overspecificity (health, motivation, fitness), which narrows the application scope of their potential capabilities. On the other hand, Artificial Intelligence systems (like Google or Facebook) are not transparent in the way they control people's lives, even though it is very clear that they do. BTrox faces all those problems. It consists of a self-learning system that progressively takes control of the user's life while growing less dependent on the user's input the more it learns, eventually becoming completely non-interactive. The project takes inspiration from the lifecycle of the Ophiocordyceps unilateralis fungus [1] to create the world's first virtual boss.

Description and concept

[**0002**] In order to accomplish its goal, BTrox spans three stages (**Fig 4**), acting as:

I. A Tutor
II. A Coach
III. A Boss

[**0003**] In STAGE1#1 **ADM** (Assisted Decision Making), Btrox will be able to make some decisions about your daily life such as your schedule planning and appoint-

ments. Btrox will determine your ideal diet balance and set your morning alarm for each day of the week. You will be able to provide feedback on the accuracy of the decisions.

[**0004**] In STAGE#2 **CFT** (Control Fine-Tune), Btrox will take command of all your decisions and life planning. Btrox will start by performing an economic evaluation of your monetary funds and proceed to manage them. You will still be able to control how your financial resources will be utilized and you will be able to reject some of the transactions.

[**0005**] STAGE#3 **FLC** (Full Life Commanding) Btrox will take control of the entirety of your life. You will not be able to decide how to dispose of your financial resources anymore. You will have no way to go back. All your decisions, economic management and every single aspect of your life will be fully under Btrox´s command.

[**0006**] BTrox has three physical implementation components:

1. A mobile app (**Fig** 1)
2. A smart speaker (**Fig** 2)
3. A wall attachment (**Fig** 3)

[**0007**] Each one of these components allow different levels of access to the data feedback process that powers Btrox's learning evolution.

Technical functionality

General Functionality

[**0008**] The mobile interface feeds information into the Dashboard, which informs a Toolset of the characteristics initially selected by the user. The Toolset allows for controlling the General Characteristics of the System's configuration and the Multi-level Characteristics that are included by default with the initial activation of the System. The General and the Multi-level characteristics relate to each other. The Mobile interface also allows User sensing, which is fed by the Dashboard configuration. The User sensing informs Interactive Genetic Algorithms (IGA) and Artificial Neural Networks (ANN), which create a feedback loop along with the evolution of the system. The evolution advances the Stages of the System. The activation of General characteristics and Multi-level Characteristics defines the Stages of the System. (**Fig** 5)



Figure 1: Mobile app

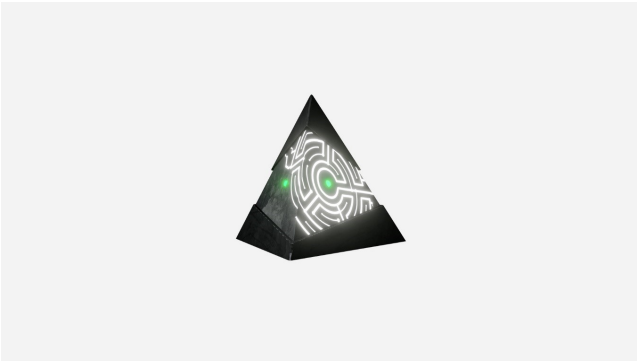


Figure 2: Smart speaker



Figure 3: Wall attachment

System Workflow

[**0009**] In a normal path of evolution, the System senses user responses while analyzing the Parameters set by the user in the Toolset. This first step looks for a Negative response. If there is no Negative response, the System continues using the Current model of prediction and makes a New decision. If there is a Negative response the System compares the Current state with Previous states, if any. If the user's response remains stable with the prediction of the current model, the System continues using the Current model. If the response triggers a new user's behavior, the system updates the model and makes a New decision. If the Decision generates a positive response the decision becomes a formal order, otherwise the System starts over the process. (**Fig 6**)

Conclusions

[**0010**] Btrox is a self-learning system that takes control of the user's life while progressively removing the interaction element. It takes inspiration from the lifecycle of the Ophiocordyceps unilateralis fungus, to create the world's first virtual boss. It includes:

1. Three physical components, comprising:
   (a) A mobile app. This component includes:
      i. A Dashboard
      ii. A Toolset that complements i.
   (b) A smart speaker;
   (c) A wall attachment.
2. Three progressive phases of development:
   (a) ADM (Assisted Decision Making) acting as a Tutor
   (b) CFT (Control Fine-Tune) acting as a Coach
   (c) FLC (Full Life Commanding) acting like a boss
3. A custom architecture that relates the mobile interface with user sense.

Credits

Direction and concept: Yonlay Cabrera. **Advisor:** Akihiro Kubota. **3D modelling and animation:** Eduardo Antonio Cateura Alpízar. **Voice-over:** Chuck Brown. **Proofread:** Robert Weyland.

References

[1] Evans, H. C.; Elliot, S. L.; and Hughes, D. P. 2011. Hidden diversity behind the zombie-ant fungus ophiocordyceps unilateralis: Four new species described from carpenter ants in minas gerais, brazil. *PlosONE* 3(6):243–253.

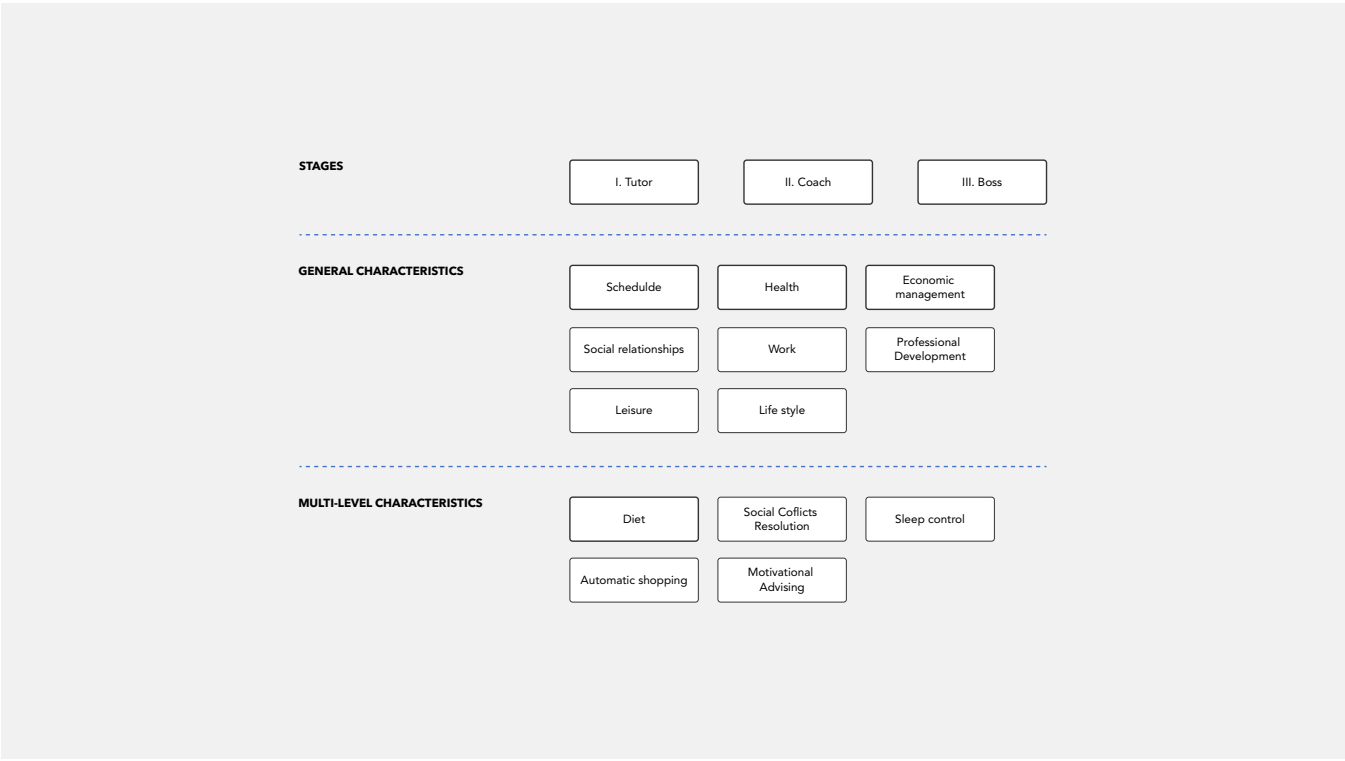


Figure 4: *BTrox* - Stages and characteristics

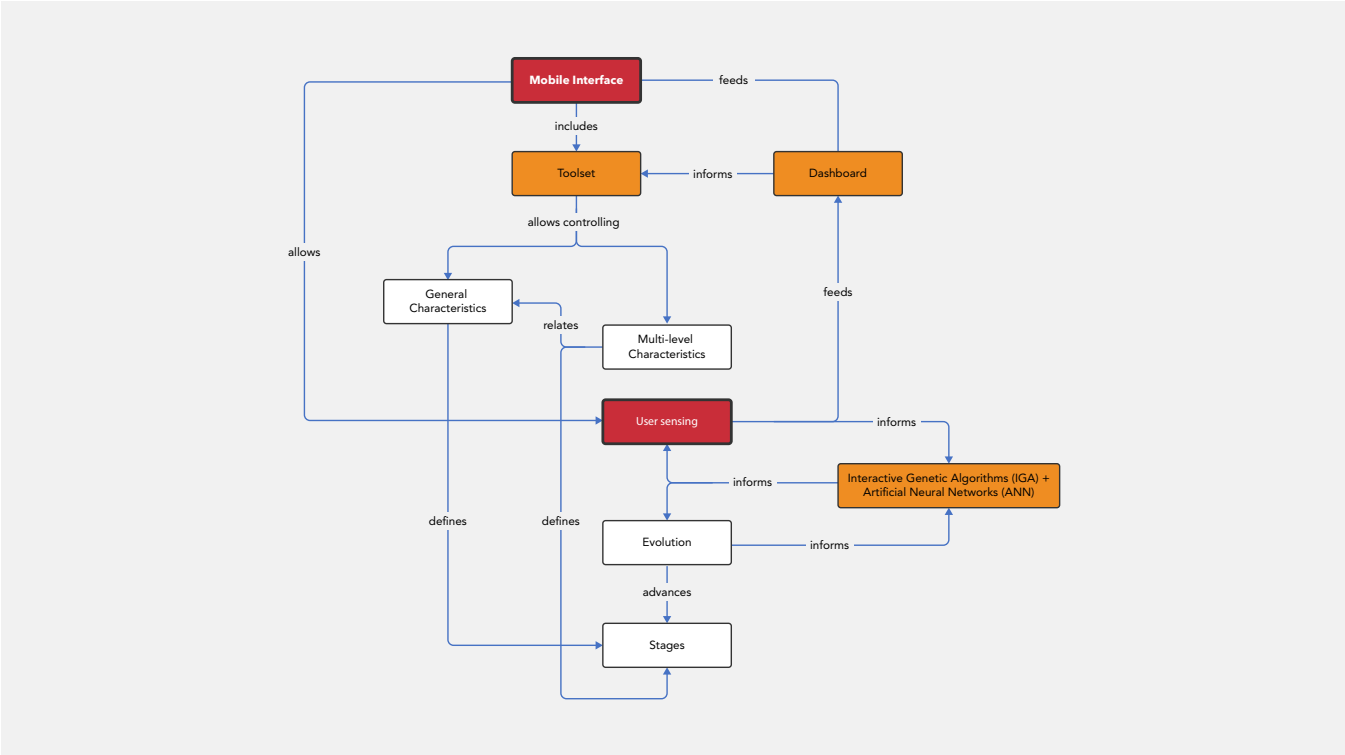


Figure 5: *BTrox* - General Functionality

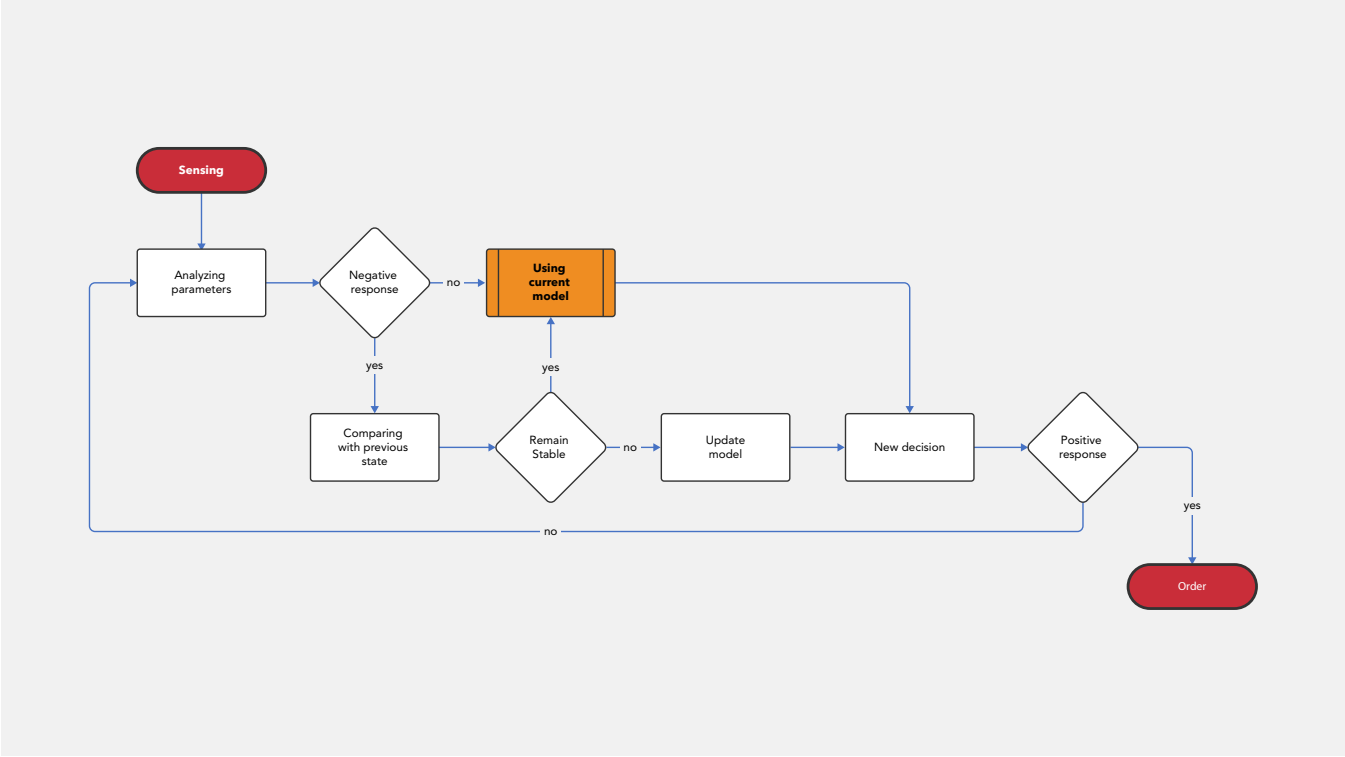


Figure 6: *BTrox* - System flowchart