



PRODUCTIVITY ENHANCEMENT USING GUI BASED AUTOMATION.

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Abstract: This research paper is aimed at describing how graphical user interfaces can be utilized to implement a level of abstraction between a non-programmer and programming which will empower the non-programmers to use the power of programming and algorithms at their disposal.

Index Terms - Graphical user interfaces, automation, productivity, python.

I. INTRODUCTION

Working manually on tasks consumes drastically more time and effort compared to when done using automation, also day to day repetitive computer-based workplace tasks can easily be automated, saving both time and effort.

Moreover, the use of machine learning modules, geeky computer techniques and various other programming bound things can exponentially help a business/person improve their productivity.

These techniques, tools, automation, etc. requires a skilled person possessing the knowledge of computer programming,

Now for a person who works in non-computer-oriented fields, like construction, agriculture, trading, etc. it is difficult to automate, use machine learning modules, use fancy computer tricks, stats, etc. which can actually benefit the person and their business/job.

One solution could be learning computer science, programming and acquiring all the skills from scratch, coming from a non-programming background, this is a huge task which could take years of efforts for improvements that the skilled class is witnessing in days or sometimes takes only hours to build a profitable task/business model with the latest and the greatest computer modules.

To overcome this problem we present a solution that is the use of graphical mediums for performing these tasks, for example imagine a chocolate business wants to know which variant of chocolate is majorly loved by their customers, now they will hire a machine learning expert or data engineer to build a module that looks at years of sales data, social media posts about chocolates, public polls, researches, etc. and creates an efficient module that determines which product is loved by the customers and why, having the right amount of skilled people at their disposal, made the company able to perform such a gigantic task with ease, on the other hand if we take an example of a small grocery shop, like the usual ones that can be seen on the streets of India, if the owner of such a shop wants to know which products are sold more and which products are sold together often, it is not feasible for the owner to learn these skills and implement such high end techniques, also it is not financially feasible to hire a data engineer, if we create an open source software which has a clean GUI and machine learning modules, automation modules, etc. are implemented using such graphical user interfaces, this would create abstraction between the actual model and the process followed by the user, the user only needs to click on buttons, give inputs, etc.

Simply put the idea is to create an open source software which helps non-programmers perform programming bound tasks and jobs with ease by using GUI.\

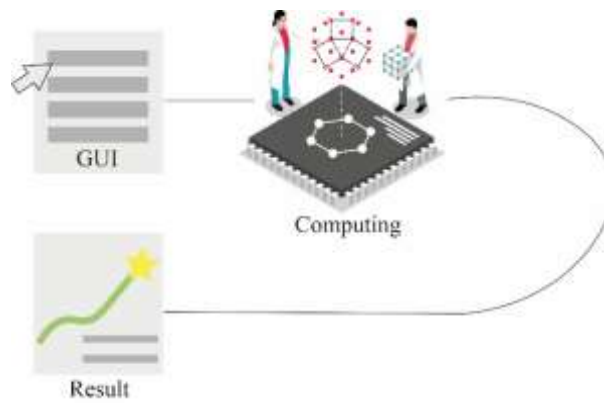


Figure 1

II. GUI FOR EASE OF USE

GUI can be used by any person of any skill group, without even the barrier of language.

GUIs can be made using various languages and also can go up to the extent of having an audio-based interface or a shape based visual interface.

The flow from input to output is as shown in *Figure 1*, the user can have various options which can include machine learning modules, automation modules, emailing, reading the daily news, tweeting, etc. all the user has to do is click on the required module and inputs are asked from the user depending on the module selected, calculations/machine learning algorithms work in the background providing abstraction to the user, and achieves the power of simplicity.

III. T-SHAPING FOR PRODUCTIVITY ENANCHEMENT

As the powerful English proverb goes “Jack of all trades, master of none”, the jack of all trades, i.e. the person possessing a knowledge of wide range of topics, rather than having in depth knowledge of a single field of interest.

Such people are called generalists or T-Shaped, the very prominent examples of such people are Elon Musk, Steve Jobs, Thomas Edison, Marie Curie these are just a few names.

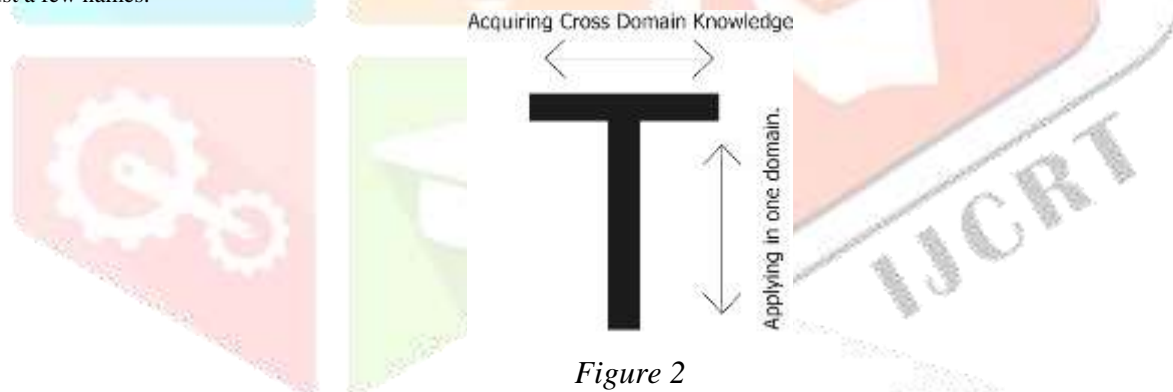


Figure 2

Such T-shaped people are considered to be more productive and creative as they have a wide knowledge range, and being good in one lets them be unique and gain advantage over others. If the expert level tools, techniques and knowledge are brought to the disposal of common people who are good at some or the other field, the productivity, creativity and innovative mindset will be boosted, resulting to better results.

IV. OPEN SOURCE ADVANTAGE

The GUI based solution so made can be open sourced via GitHub.com or similar tools, and this will lead to continual improvements in the solution and programming class working to create better and new modules and implement them with GUI in one tool and the non-programmers can take advantage of the huge community-based build.

V. ACKNOWLEDGEMENT

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