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**F**or **t**he**P**eople

# PROBLEM SUMMARY(ABSTRACT)

People’s feedback is an important aspect of democracy and this often gets overlooked in India. In this project, we aim to get feedback of willing people by making certain online platforms that are open to all. We plan to closely analyze these inputs from the people and extract important parameters, like the problem, location, which department/ministry it is falling under, frequency of submission. This data would be then submitted to the authority of city/state and hence they can be notified about the persisting issues under their locality. Hence by getting such feedbacks, analyzing them closely and solving problems, we aim to help people resolve their problems and work as a stepping stone towards perfect democracy.

The services which are provided by the government with an assurance “For the People” are built and never looked upon unless there is wreckage in their daily functioning. Since we live in a democracy, it becomes our right to enjoy every service in its best possible way. Hence, we aim to solve this problem by creating online platforms immersed with data analytics.

# I. INTRODUCTION

* The central intuition behind the working of this system is to let people enjoy real democracy. We observed that a lot of recent movements and bills targeted the citizen's privacy or were against the will of citizens.
* And lots of influential voices and opinions were left unheard. And this continues and keeps getting deep-rooted with every passing day.
* Other than that, the genal grievances of the people remain unheard by the intuitions that were established to solved them
* The major reason behind all the above being lack of a system that can meaning fully collect, organise and represent to the above-mentioned authorities

II.Machine Learning tools

**spaCy**: It is designed to help you do real work — to build real products, or gather real insights. The library respects your time, and tries to avoid wasting it. It's easy to install, and its API is simple and productive. We like to think of spaCy as the Ruby on Rails of Natural Language Processing.

**en\_core\_web\_sm:** It is a English multi-task CNN trained on OntoNotes. Assigns context-specific token vectors, POS tags, dependency parse and named entities.

**NLTK:** It is a leading platform for building Python programs to work with human language data. It provides easy-to-use interfaces to over 50 corpora and lexical resources such as WordNet, along with a suite of text processing libraries for classification, tokenization, stemming, tagging, parsing, and semantic reasoning, wrappers for industrial-strength NLP libraries

# III.SCOPE/APPLICATION

# IV.COMPONENTS

IV.1 Python



Fig 1. Python

Python is used successfully in thousands of real-world business applications around the world, including many large and mission critical systems. Python is aninterpreted[,](https://en.wikipedia.org/wiki/Interpreted_language)high[-](https://en.wikipedia.org/wiki/High-level_programming_language)level[,](https://en.wikipedia.org/wiki/High-level_programming_language)general[-](https://en.wikipedia.org/wiki/General-purpose_programming_language)purposeprogramming language. Created byGuido van Rossumand first released in 1991, Python's design philosophy emphasizescode readabilitywith its notable use ofsignificant whitespace. Its language constructs andobject orientedapproach aim to help programmers write clear, logical code for small and large-scale projects.

IV.2 spaCy



Fig 2. Spacy

**spaCy** is designed to help you do real work — to build real products, or gather real insights. The library respects your time, and tries to avoid wasting it. It's easy to install, and its API is simple and productive. We like to think of spaCy as the Ruby on Rails of Natural Language Processing.

IV.3 Flask



Fig 3. Flask

**Flask** is a micro [web framework](https://en.wikipedia.org/wiki/Web_framework) written in [Python](https://en.wikipedia.org/wiki/Python_(programming_language)). It is classified as a [microframework](https://en.wikipedia.org/wiki/Microframework) because it does not require particular tools or libraries. It has no database abstraction layer, form validation, or any other components where pre-existing third-party libraries provide common functions. However, Flask supports extensions that can add application features as if they were implemented in Flask itself. Extensions exist for object-relational mappers, form validation, upload handling, various open authentication technologies and several common framework related tools. Extensions are updated far more frequently than the core Flask program. Applications that use the Flask framework include [Pinterest](https://en.wikipedia.org/wiki/Pinterest) and [LinkedIn](https://en.wikipedia.org/wiki/LinkedIn).

IV.4 Selenium



Fig 4. Selenium

**Selenium** is a portable framework for testing web applications. Selenium provides a playback tool for authoring functional tests without the need to learn a test scripting language (Selenium IDE). It also provides a test domain-specific language (Selenese) to write tests in a number of popular programming languages, including C#, Groovy, Java, Perl, PHP, Python, Ruby and Scala. The tests can then run against most modern web browsers. Selenium runs on Windows, Linux, and macOS. It is open-source software released under the Apache License 2.0.

IV.5 Flutter



Fig 5. Flutter

Flutter is Google’s UI toolkit for building beautiful, natively compiled applications for mobile, web, and desktop from a single codebase.

IV.6 Firebase



Fig 6. Firebase

Firebase is a mobile and web application development platform developed by Firebase, Inc. in 2011, then acquired by Google in 2014. As of March 2020, the Firebase platform has 19 products, which are used by more than 1.5 million apps.

# V.BLOCK DIAGRAM



Overall Block Diagram of system

VI.FLOW CHART

VI.1: Flowchart part 1:



NLP Engine Flowchart

VI.2: Flowchart part 2:



Macro Analysis Engine Flowchart

VI.3: Flowchart part 3:



E-Governance Flowchart

|  |  |
| --- | --- |
| Work | Status |
| NLP engine | ✔ |
| NLP Feedback System | ✔ |
| Web Panels | ✔ |
| Mobile Applications | ✔ |
| Social Media bots | ✔ |
| Macro Analysis Engine | ❌ |
| E-Governance | ✔ |

# VII.Work Done

# VIII.Work Pending

|  |  |
| --- | --- |
| Work pending | Weeks |
| Macro Analysis Engine | 1.5 Weeks |
| Human Classifier | 0.5 Weeks |

IX. Results

1. Android application

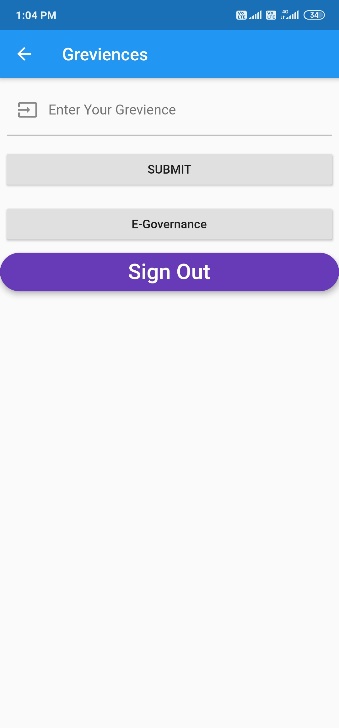
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1. Website webpages



Fig 12. Home Page

Fig 13. Classified reports page

Fig 14. Votes analysis page

Fig 15. Entity adder page

# X.REFERENCES

References as on date (25/02/2020):

* Fix-my-Street, Brazil
* Zubair Bhatti’s work using [pro-active citizen feedback](https://apolitical.co/the-anti-viral-app/)
* UK’s ‘nudge unit’ used in organ donation