



# Bank Alfalah Internship Project Report

## Facebook Leads Extraction and PipeDrive Customer Relationship Management Solution

### Advanced Analytics Department

Department Head: Chaudhry Sohail

Project Supervisor: Muhammad Talha Khan

Project Interns: Fawzan Ahmed Katariwala  
Fawwad Ahmed

## EXECUTIVE SUMMARY

One of the major tasks at the Corporate Headquarters of Bank Alfalah is to obtain and compile potential leads from various social media networks, and to push all such leads to an in-house Customer Relationship Management (CRM) solution. The existing system responsible for leads extraction and filtration is manual hence resulting in time and labor inefficiencies. There is no filtration before the further processing of leads obtained via extraction.

To overcome this problem, we have developed an efficient, and automated system which will be capable for the regular extraction of leads from Facebook. Furthermore, to streamline the process of lead processing, we have developed a transitional mechanism for the integration of extracted Facebook leads into a CRM solution.

The Facebook comments extraction took an estimated time of 4 hours to extrapolate all comments since the creation of both Facebook pages – Bank Alfalah and Bank Alfalah Islamic Official. The program took an hour to extract potential leads, and setup a PipeDrive based CRM pipeline for further leads processing. The daily scheduler took fifteen minutes to retrieve new Facebook comments, and to integrate newly generated leads to a PipeDrive Pipeline. All these programs were streamlined, and worked smoothly without any human interaction. The main objective of an automated lead generation, and management system was achieved.

A possible extension to this project would be to use the setup of PipeDrive CRM solution to further process filtered leads by integrating an intermediate pipeline thus to obtain maximum number of potential leads that have a higher probability of realization and business value. This filtration can be based on any valid criteria that complement the strategy of the Bank.

## OVERVIEW OF BANK ALFALAH

Bank Alfalah Limited was incorporated on June 21 1997 as a public limited company, under the Companies Ordinance 1984. Its banking operations commence from November 1, 1997. The bank is engaged in Islamic banking, commercial banking related services as defined in the Banking Company Ordinance, 1962. The bank is currently operating through 195 branches in 74 cities, with the registered office at B.A. Building, I.I. Chundrigar, Karachi.

Management of Bank Alfalah accepted the challenge to transform this bank into a highly professional, most efficient & service oriented institution. The management has been successful in fulfilling the undertaken challenge. It has been successful in making a significant contribution to both corporate and retail banking in Pakistan. Over the years, its emphasis on growth has resulted in a strong entity capable of offering high quality services to a wide spectrum of clients, in a highly challenging business environment. Its strategy is to maximize the synergies of branch network through an optimal allocation of financial resources in the face of dynamic challenges of present financial environment. Strengthened with the banking of the Abu Dhabi Group and driven by the strategic goals set out by its board of management, the Bank has invested in revolutionary technology to have an extensive range of products and services. This facilitates their commitment to a culture of innovation and seeks out synergies with clients and service providers to ensure uninterrupted services to its customers. The bank perceives the requirements of its customers and matches them with quality products and service solutions. During the past ten years, we have emerged as one.

Of the foremost financial institution in the region endeavoring to meet the needs of tomorrow today. Bank Alfalah Limited has continued its upward climb in pursuit of excellence. Strengthened by the backing of the Abu Dhabi Group and driven by strategic goals set

out by its Board and management, Bank Alfalah Limited increasingly inspires trust and confidence of all its clients. Within a short span of time the bank has carved a significant niche for itself in the banking industry.

These achievements have been preceded by concerted effort to provide highest level of service and value to our customers. The bank aims to further enhance performance standards through implementation of innovations in both products as well as customer care, by discovering newer avenues of client benefit. This customer-focused strategy has enabled Bank Alfalah Limited to evolve as a single source financial service provider of corporate and retail banking services. Bank Alfalah reputation has been built on its tradition of high quality and the expertise of its extremely motivated and qualified staff. With strategic mergers and acquisition, Bank Alfalah has become a leading player in the global banking arena.

The Bank Alfalah Limited team comprises of dedicated professionals equipped with a diverse array of skills, vast experience and pro customer attitudes. The management concentrates its energies on making informed economic decisions, translating it into greater returns for our investors and customers. This prudent attitude has created a synergistic organizational structure leading to improvements in profitability and a sustainable competitive advantage for the bank.

A Highly Responsive Product Portfolio is not only comprehensive but also customizable to match the needs and preferences of the customers. These characteristics of the portfolio have helped Bank Alfalah Limited to face challenging economic conditions.

## INTERNSHIP PROGRAM PLAN

The internship was planned for a period of 10 weeks at Bank Alfalah Advanced Analytics department, Main Branch, Karachi. The Advanced Analytics department is the latest extension to the Strategy Department which is responsible for providing Data Science and Business Analytics solutions for Bank Alfalah.

The start date of the internship was 1<sup>st</sup> June 2017 and the internship period ended on 11<sup>th</sup> August 2017.

The key activities of Advanced Analytics department during the tenure of the internship was as follows:

- Formulate viable data sets with business value to the Bank from various internal and external sources.
- Device Models to predict business activities on various grounds and to provide valuable insights on the current operations of the bank.
- To analyze business activities of Bank Alfalah on competitive and profit grounds.

## DETAILS OF THE PROJECT

### Background:

One of the major tasks at the Corporate Headquarters of Bank Alfalah is to obtain and compile potential leads from various social media networks, and to push all such leads to an in-house Customer Relationship Management (CRM) solution.

Currently, this entire task is performed manually by media agency; responsible to visit social networking websites, and list down all potential leads with their contact information. Once these leads are compiled and forwarded to the Marketing department, employees at relevant Sales centers are tasked to reach target audience for sales pitches without any segregation or filtration.

### Problem statement:

The existing system responsible for leads extraction and filtration is unproductive due to time and labor inefficiencies. There is no filtration before the further processing of leads obtained via extraction.

### Project Objective:

- Develop an efficient, and automated system which will be capable for the regular extraction of leads from Facebook.
- Develop a transitional mechanism for the integration of extracted Facebook leads into a CRM solution.

### Methodology:

- Developed a program which uses Facebook Graph API to extract all Facebook status details, and user comments on individual posts from Bank Alfalah and Bank Alfalah Islamic Official Pages. The pertinent program utilizes publicly accessible Facebook Page Keys and Graph API User Access tokens.
- Filtered out all comments from the bank to obtain a valid search span for leads extraction.
- Analyzed all post comments which contained customer contact information, and filtered them as potential leads.
- Extracted all publicly accessible user details such as Username, Facebook ID, Contact Number and Comment URL for all comments filtered as leads.
- Explored user comments and status messages to tag potential product interest for each lead generated.
- Created a task scheduler for the lead extraction program to extract new leads daily.
- Assigned a five-day time span for retrieving new comments from previous posts to update, and maintain potential leads from old Facebook campaigns.
- Developed a program for integrating generated leads into PipeDrive.
- Ensured that unique contacts are added into PipeDrive, and product deals are issued on each contact with a customer, respecting their personal interests.

## Software and Hardware Specification:

The proposed system requires following specifications:

- Python programming language version 3.6 under anaconda 4.3.0 environment installed.
- A computing machine with an 8 GB Ram, and a 3.6 GHz processor under a supported operating system.
- A reliable internet connection.

## Results:

- The Facebook comments extraction took an estimated time of twelve hours to extract all comments since the creation of both Facebook pages – Bank Alfalah and Bank Alfalah Islamic Official.
- The program took an hour to extract potential leads, and setup a PipeDrive based CRM pipeline for further leads processing.
- The daily scheduler took fifteen minutes to retrieve new Facebook comments, and to integrate newly generated leads to a PipeDrive Pipeline.
- All these programs were streamlined, and worked smoothly with any human interaction.
- The main objective of an automated lead generation, and management system was achieved.

## References:

- <https://developers.facebook.com/tools/explorer>
- <https://developers.facebook.com/docs/graph-api>
- <https://www.pipedrive.com>

## RECOMMENDATION

Upon completion of the mentioned project, some recommendations that can serve as a possible extension to this project would be to use the setup of PipeDrive CRM solution to further process filtered leads by integrating an intermediate pipeline thus to obtain maximum number of potential leads that have a higher probability of realization and business value. This filtration can be based on any valid criteria that complement the strategy of the Bank.

Since the advanced Analytics department is a new addition to the strategy team, there is room for much improvement in infrastructure and diversity of the department. Some recommendation would be to install a local server for help with computational expensive tasks that the department face regularly. It would also do the department good to increase the diversity of skilled work force for better management of larger set of problems that Analytics aim to tackle in the near future.