

# Internship Report

submitted in partial fulfillment of the requirement  
for the Award of the Degree of

**Master of Computer Application**

by

*Debaroti Biswas*

under the employment of

*Ugam Solutions*



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Bharatiya Vidya Bhavan's  
Sardar Patel Institute of Technology  
(Autonomous Institute Affiliated to University of Mumbai)  
Munshi Nagar, Andheri-West, Mumbai-400058  
University of Mumbai  
June 2022

## **Certificate**

This is to certify that the "Internship Report" submitted by Debaroti Biswas is work done by her at Ugam Solutions and submitted during the 2020-2021 academic year, in partial fulfillment of the requirements for the award of Degree of Masters in Computer Applications from University of Mumbai.

**Certified by**

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<Internship certificate provided by the internship organisation>

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All the individuals that worked along with me at Ugam Solutions; their patience and openness created an enjoyable working environment for me. I acknowledge the help of all of these individuals with an immense sense of gratitude.

## Abstract

Ugam, a Merkle Company, is a global leader in managed analytics that helps retailers, brands and market research firms transform big data into valuable insights. The company's unique managed services offering combines a proprietary big data technology platform with deep domain knowledge and analytics expertise to empower clients to make decisions that improve their business. For retailers, on-line marketplaces and brands, Ugam supports better merchandising, marketing and channel management decisions through the use of analytics. For market research firms and insight-based consultancies, Ugam offers a portfolio of solutions including end-to-end research operations, technology transitioning support, and data warehousing, visualization and reporting that enables them to better serve their clients. Five of the top 10 U.S. retailers, four of the leading Australian retailers, many of the world's largest brands and online marketplaces, and 13 of the top 25 market research firms work with Ugam because of its ability to deliver high-quality insights with unmatched customer experience.

The six months journey with Ugam as an intern has helped me leverage my experience as an employee and helped me gain knowledge on how consulting firms work. This report focuses on the detailed routine I followed on achieving this experience, obstacles I faced during that time, how I overcame them and the results I got at the end. Also, this report is made keeping in mind not to disclose any company data or process as per the company's rules and ethics.

Our internship was mainly divided into two parts. Phase 1 was Foundational, which was working and learning with Great Learning, a platform which helped me brush up my old skills and learn completely new technologies as well. The subjects in phase 1 included Digital Marketing, Data analytics, Excel, Programming concepts, SQL, Cloud, Python and EDA. Statistics and Linear Regression, etc. We had to make two brief projects named Capstone 1 and 2 based on the learnings of phase 1 and the results of these decided our roles in phase 2. Phase 2 was Team and Role specific training and I was allocated in the Tech platform.

The report includes a brief overview of the tasks performed in Capstone 1 and 2 and the results achieved from them. In phase 2 after getting in Tech team I was further allocated in SID migration(Snowflake) platform. Working for two and a half months in Snowflake helped me gain a lot of knowledge about this new yet developing technology.

SID migration(Snowflake) is a live project that I was working on and I had to report and discuss daily with my manager on what was achieved in the day and what to work on next. My research and work on many parts have been taken into account and are and will be used in the live project for migration purposes. All the work was asked to be well documented and a separate report for the company has been made so that it can be further used in future.

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# List of Abbreviations

SID	Single Instance Data store
EDA	Exploratory Data Analytics
SQL	Structured Query Language
UAT	User Acceptance Testing
KT	Knowledge Transfer
B2B	Business to Business
B2C	Business to Consumer
EOD	End Of Day
RND	Research and Development

# Chapter 1

## Introduction

### 1.1 Ugam Solutions

Ugam, a Merkle company, is a leading analytics and technology services company. Our customer-centric approach delivers impactful business results for large corporations by leveraging data, technology, and expertise. We consistently deliver superior, impactful results through the right blend of human intelligence and AI. With 4600+ people spread across locations worldwide, we successfully deploy our services to create success stories across industries like Retail and Consumer Brands, High Tech, BFSI, Distribution, and Market Research and Consulting. Over the past 21 years, Ugam has been recognized by several firms including Forrester and Gartner, named the No.1 data science company in India by Analytics Insight, and certified as a Great Place to Work®.

The name Ugam comes from the ancient Sanskrit language and means “source” or “origin.” Ugam seeks to be the source of solutions for the complex problems of retailers, brands and market research firms worldwide. The name signifies the company’s position as a pioneer in the market for data and analytics, and the source of relevant actionable insights for clients.

### 1.2 Location of Internship

We were given a choice between Goregaon, Thane and Bangalore and I chose Goregaon. The full address is 6th Floor, B-Wing, Prism Towers, New Link Rd, Goregaon West, Mumbai, Maharashtra 400062.

It was also a choice whether to work from office or home and the entire internship was done work from home.

### 1.3 Project Description

Capstone 1 and 2 were integrative end-to-end projects where interns were provided with a real-world business problems and expected to develop and present comprehensive solutions that was evaluated by Great Learning’s internal industry professionals. It was mandatory to have data-driven and actionable insights/recommendations. Capstone 1 evaluated our understanding of the modules covered under Digital marketing, Excel and SQL. Capstone 2 had problems covered under the section data



analytics segment using Python.

The project on phase 2 was a live project based on Snowflake and data migration. As it had data involving client related information we were asked not disclose any information regarding this project and the whole project is labeled confidential. The main work on this project was moving client data from one platform to snowflake using task, stream, merge etc. Snowflake is a new and evolving technology and working briefly on this segment helped me gain a great deal of knowledge and experience.

## 1.4 Contribution

### Capstone 1

- Excel - The data-set contained 70000+ rows for sales in two Australian fashion stores The objective of this project was to create a dynamic dashboard with key metrics. The expected output is two-fold: An excel spreadsheet with at least one tab for each of the tasks assigned. Second, a step-by-step documentation of the steps taken to create the above spreadsheet.
- SQL - A Store wise Sales and inventory data-sets was given for a retail store of USA. The objective of this project was to use the data and analyze the sales at various layers (such as product, store, city,state etc.)We had to answer a few key questions that was helpful in pricing and product placement decisions.
- Digital Marketing - The objective of this assignment was to build a customer persona for a specific business segment that will incorporate all the traits of the buyer.This should enable the business in positioning their message and drive maximum reach. The organization in focus for this assignment was “Starbucks”.

### Capstone 2

- Statistical Analysis - The data-set had card payments data published by the Reserve Bank of India on a monthly basis. The data covered the methods of payment used in retail transactions and ATM transactions in India. It constituted payments via debit cards, credit cards, ATMs etc,. This data had to be used to analyze the trend and adaptation of digital payment over the years. Using the Python we had to analyze data and make meaningful inferences about the pattern of usage of credit card and debit card over the years.
- Linear Regression - The data-set contained the orders made in the company “olist”. Based on the existing products and respective prices “olist” had to predict the price of new items that are coming to its inventory.Using linear regression model we had to predict the price of a certain product for this E-commerce Company.

## **SID migration(Snowflake)**

- Understanding the flow of work for the project
- Getting introduced to Snowflake, snowpipe, Kafka and other important topics and how to work with the same.
- Understanding the data-set to work on.
- Building logic to flow the data from a source to target, merging extra rows and data and creating query that does the same work.
- Generating SID report and template report.
- Documenting and submitting the entire process for future understanding and use.

# Chapter 2

## Internship Objectives

### 2.1 Learning Objectives

Internships are educational and career development opportunities, providing practical experience in a field or discipline. They are structured, short-term, supervised placements often focused around particular tasks or projects with defined timescales. An internship may be compensated, non-compensated or some time may be paid. The internship has to be meaningful and mutually beneficial to the intern and the organization. It is important that the objectives and the activities of the internship program are clearly defined and understood.

Following are the intended objectives of internship training-

- Expose technical students to the industrial environment, which cannot be simulated in the classroom, thereby creating competent professionals for the industry.
- Provide possible opportunities to learn understand and sharpen the real time technical /managerial skills required at the job.
- Expose students to the current technological developments relevant to the subject area of training.
- Utilize the experience gained from the ‘Industrial Internship’ in classroom discussions.
- Create conducive conditions in the quest for knowledge and its applicability on the job.
- Learn to apply their technical knowledge in real industrial situations.
- Gain experience in writing technical reports/projects.
- Expose students to the responsibilities and ethics of the engineering profession.
- Familiarize students with the various materials, processes, products and their applications along with relevant aspects of quality control.
- Promote academic, professional and/or personal development.

- Expose the students to future employers.
- Understand the social, economic and administrative considerations that influence the working environment of industrial organizations
- Understand the psychology of the workers and their habits, attitudes and approach to problem solving.

# Chapter 3

## Monthly Progress

### 3.1 January 2022

We were handed over Ugam's laptop along with a bag and notebook before onboarding process started. The onboarding started from 11th January 2022. The whole internship batch were introduced to each other via virtual games. As the process was virtual we were asked to fill up many forms and there were many formalities that had to be done. There on we were introduced to Ugam's etchics, values, mission and vision etc. Also, we had soft skills sessions like communication training, client practices, preparing for meetings, charts training going on. Alongside we were working on technical skills with Great Learning's courses and mentored classes.

### 3.2 February 2022

Soft skill sessions were still going on and along with that we had to submit assignments on Great Learning's dashboard. Our courses on that platform on the month of February were Digital Marketing, Data Analytics and Transformation using Excel, OOP's concept, Java and basics of Python. All these courses had numerous recorded videos after going through them we had to attend the assignments. At the end of this month we were given the problem statement for Capstone 1. We had two weeks time to complete the same.

### 3.3 March 2022

After Capstone 1 was over we had theoretical sessions on cloud and Amazon AWS. We had online mentored session along with recorded lectures and assignments. We worked on advanced SQL and databases. After SQL I learned about Linear Regression and Statistics which was a whole new concept for me. Pandas, Numpy, Matplotlib, Stats were some new libraries and concepts that I worked on hands-on. We had ample amount of examples to check and work on. We had to analysis on those examples such as univariate and bivariate analysis to recognize trend of a model. In Statistics we learnt Hypothesis tests like annova, Chi-square, T-test. We learnt how to train a model in linear regression. We also had project Capstone 2 based on the things learnt in this month.

### **3.4 April 2022**

We worked on Capstone 2 for 2 weeks and based on the evaluation of that project we were decided for our next phase - Team and Role specific curriculum. I was decided to be a part of the tech team. There were 15 interns from the tech team and we were further sub-categorized into different platforms. Here I had the opportunity to work in SID migration(Snowflake) platform. We were slowly introduced to this new and upcoming technology following the introduction to the team members. My work was divided with me and another intern. We were given KT videos to watch and understand and also asked to start with demonstrating the flow of work understood from the videos thus watched.

### **3.5 May 2022**

Started learning and working in Snowflake. We had to update daily EOD with the progress made and asked to make improvements in codes if necessary. Our codes during this time was mainly related to database and SQL. We worked on sample client data having 11 million rows as an example. All work were logged in jira and bitbucket and also documented well for future references. We came up with few codes and logics that are to be used in production purposes. Rest codes and improvements were considered for RND purposes so that we understand the workflow well.

### **3.6 June 2022**

In the last month we were asked to deep dive in Java and Javascript and main work was with User Defined Functions. Template reports were asked to be generated from Java codes. Few codes earlier implemented was improved for production so that it fits the needed scenario. So we learnt to make user defined defined functions in Javascript. We had to explain our codes to new intern who were about to replace us. At the end we made report for SID migration work done in two and half months which was lastly reviewed by upper managers and accepted.

# Chapter 4

## Results and Discussion

The internship course in Ugam mainly focused on how to make the interns familiar with work in Ugam and make them corporate life ready. Starting with basics I brushed up my already learned technologies. I learned how to train a model in Statistics and Linear Regression which was further used in Capstone 2 project. There was Quiz for every course in Great Learning which helped me further in deciding how much I have grasp on that subject. Working in Snowflake with a team gave me a great experience of team work and working collaboratively with a partner to achieve what the company needs.

### 4.1 Achievement of Internship Objectives

- Developed an understanding of how challenging human-level problems can be approached and solved using a combination of tools and techniques.
- Experienced end-to-end problem solving using a combination of tools and techniques in data management in Snowflake.
- While learning about Digital Marketing I understood business scenarios and the trade-offs that need to be made when solving a problem in real life and appreciate the same.
- Undertook a multi-faceted project that demonstrates my understanding and mastery of the key techniques in all the courses along with your fundamental knowledge of Marketing.
- Gauged my expertise in coding with python and java. Helped me learn how to optimize codes and make it production ready.
- Developed better presentation, report writing skills and team work.

### 4.2 Procurement of Industry Skills

The journey with Ugam for 6 months has helped me enhance my strategic management skills. Working in a live project and making other two important projects helped me improve my project management skills. While doing this projects I learnt how to initiate, plan, execute and control the assignment with a designated team of

experts. Digital Marketing was a whole new concept for me and something I was unaware of. I grasped new terms like B2C, B2B etc. I mastered new technologies and expertized old ones. Working on a new and developing technology like Snowflake was a overwhelming experience but with monitored guide from my manager helped me in learning new concepts. Working on my soft skills was something necessary for me and Ugam helped on this part as well. Sessions such as negotiation skills, email writing, communication with client and team, say it with charts was a brilliant experience. The exposure with all these sessions along with other interns and managers had positive impact on me.

### **4.3 Project Results**

In the internship I have successfully completed two Capstone projects with good grades. Along with that assignments and quizzes of every course Great Learning asked us to complete. Enhanced my soft skills while having sessions and working with other interns and managers. Also, I delivered reports to my manager for the live project I was working on. In that there were a couple of codes and logics that was accepted for production level, which means those codes will be used for future purposes. I further rectified and updated few codes when asked for. So in the whole process I learnt not only team management but also debugging and error correction.

### **4.4 Challenges Tackled**

This was the first time working as an employee/intern in any firm. This experience was new and it took me little time to get used to day-to-day lifestyle of a company. Faced few challenges debugging on Snowflake as this is a very new technology and there is not much articles or books readily available on the internet. Following best practices to write a code and making it understandable to layman as asked by my manager was another challenge I faced which I worked on and improved myself daily.



# Chapter 5

## Conclusion

I am really grateful and appreciative of Ugam Solutions giving me this opportunity to provide them with my knowledge and work with them. In this period I have got excellent professional exposure of a consulting firm. Along with boosting my technical abilities I got the chance of upgrading my analytical and soft skills and improved my communication skills as well. I can safely say that my understanding of the job environment has increased greatly. From all the learnings two most important things after my experience in this firm are the importance of time management and being self-motivated.

Working with my manager and teammate on Snowflake was an overwhelming experience that will help me a lot in the near future. Journey with Great Learning was a new for me as well and had a great rewarding experience of learning fundamentals of Linear Regression, Statistics, ML and Digital Marketing.

Overall this six months was a great rewarding experience working for the first in any company as an intern. I am really obliged to Ugam Solutions for this and I am looking forward to be an impactful full time employee next.

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