



**BOLT UBC**

# **FIRST BYTE 2023 CASE PACKAGE**

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BYTE 

BOLT UBC MASCOT

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## DISCLAIMER

**IT IS THE COMPETITORS' RESPONSIBILITY TO  
REVIEW AND UPHOLD APPLICABLE STANDARDS OF  
FAIR COMPETITION.**

**INSTANCES OF MISCONDUCT, SUCH AS CHEATING,  
PLAGIARISM, RESUBMITTING THE SAME CODE, OR  
IMPERSONATING A CANDIDATE, WILL RESULT IN  
THE COMPETITOR AND THEIR TEAM BEING  
AUTOMATICALLY DISQUALIFIED.**

If you have any questions email us at [boltubc@gmail.com](mailto:boltubc@gmail.com)



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## INTRODUCTION

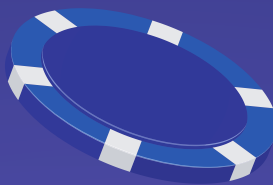


JEFFREY, THE CEO OF BLUECHIP CREDIT, SIGHS TIREDLY AFTER OBSERVING THE FINANCES OF HIS COMPANY. HE FINDS THAT HE IS LOSING MORE AND MORE CUSTOMERS, AND HIS CREDIT CARDS ARE GETTING LESS AND LESS POPULAR. HE IS STRUGGLING TO DETERMINE THE ROOT CAUSE AND IS BECOMING INCREASINGLY FLUSTERED AT THE COMPANY'S RISING ATTRITION RATES.

TO MAKE MATTERS WORSE, THIS IS NO SECRET, AND THE PRESSURE IS MOUNTING FROM INVESTORS AND LEADERSHIP. WITH ATTRITION RATES AT AN ALL-TIME HIGH, THE BOARD HAS DEMANDED THAT JEFFREY CONDUCT AN IMMEDIATE INVESTIGATION AND OUTLINE AN ACTION PLAN.

RECOGNIZING THAT HE MAY NOT HAVE ALL THE NECESSARY RESOURCES AND SKILL SETS AT HIS DISPOSAL, THE BOARD HAS GIVEN PERMISSION TO WORK WITH THE DATA ANALYTICS TEAM TO ENSURE THAT HIS INSIGHTS AND RECOMMENDATIONS ARE DATA-DRIVEN.

THE DIRECTOR OF THE BOARD HAS GIVEN JEFFREY A 15-MINUTE SLOT TO PRESENT HIS FINDINGS DURING THEIR NEXT BOARD MEETING. THE DIRECTOR HAS WARNED JEFFREY THAT THE CIRCUMSTANCES ARE DIRE, AND THAT HE IS BEGINNING TO LOSE CONFIDENCE FROM SOME OF THE OTHER MEMBERS. JEFFREY MUST BE MINDFUL OF THIS AS HE PREPARES FOR THE PRESENTATION.



BLUECHIP CREDIT

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## INSTRUCTIONS

YOU ARE PART OF THE DATA ANALYTICS TEAM AT BLUECHIP CREDIT, AND JEFFREY HAS REACHED OUT REQUESTING IMMEDIATE ASSISTANCE. HE HAS ALREADY BEGUN TO COMPILE SOME HELPFUL INFORMATION (SEE INDUSTRY INFORMATION) BUT NEEDS THE SUPPORT OF HIS DATA ANALYTICS TEAM.

YOU RECALL THAT THE DATASET WAS CREATED BY A FORMER EMPLOYEE WHO HAD LEFT THE COMPANY, AND LATER DATA WAS ADDED BY A NEW HIRE, RESULTING IN ERRORS IN THE PROCESS.

JEFFREY ALSO INDICATES THAT THE BOARD HAD PROVIDED HIM WITH A DETAILED LIST OF EXPECTATIONS, AND WOULD LIKE THE PRESENTATION TO INCLUDE THE FOLLOWING:

- FILTERED DATA, REMOVING ANY ERRORS
- SUMMARY OF KEY FINDINGS FROM THE DATASET (3-5 VISUALIZATIONS) TO BETTER UNDERSTAND ATTRITION
- A CLEAR STATEMENT OF WHICH SUBSET\* OF INDIVIDUALS YOU BELIEVE TO HAVE THE LARGEST IMPACT ON EMPLOYEE TURNOVER. THIS SHOULD BE DERIVED FROM THE DATASET.
- A SET OF REALISTIC, DATA-DRIVEN RECOMMENDATIONS ON HOW THE COMPANY CAN BEST ADDRESS THE NEEDS OF THE IDENTIFIED SUBSET AND DECREASE THE ATTRITION RATE IN THE FORESEEABLE FUTURE.
- THEY WOULD ALSO LIKE YOU TO OUTLINE WHAT SUCCESS LOOKS LIKE AND HOW THEY WOULD GO ABOUT MEASURING THE EFFICACY OF YOUR RECOMMENDATIONS.
- NICE TO HAVE: AN EXPLANATION OF YOUR DATA ANALYSIS STEPS AND HOW YOU CAME TO YOUR CONCLUSIONS AND OUTCOMES

YOU WILL HELP THE CEO WITH EACH OF THE ABOVE POINTS, INCLUDING THE PRESENTATION THAT SHE WILL DELIVER TO THE BOARD. STATE ANY ASSUMPTIONS CLEARLY.

\* THE SUBSET CAN BE ANY CATEGORIZATION THAT YOU CHOOSE. THIS COULD BE BASED ON VARIABLES SUCH AS AGE, MARITAL STATUS, CARD CATEGORY, ETC.



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## COMPANY BACKGROUND



### BLUE CHIP CREDIT

Blue Chip Credit is a credit service provider based in Vancouver, Canada. It was founded in 2015 by Darius Leopold, Grozdana Melanthios, and Sachie Miu, a team of individuals with backgrounds in finance, computer science, and marketing. The company is focused on providing credit card solutions for customers of all walks of life, offering card options ranging from standard blue cards, to platinum cards.

#### VISION



We want to make all transactions safe and accessible to help individuals and businesses to thrive.

#### MISSION



To provide all individuals revolutionary and reliable credit cards that benefit everyone anywhere in the world.

### VALUES

**Quality** - We want to provide the highest quality credit cards on the market

**Innovation** - We aim to positively impact the lives of all our customers

**Accessibility** - We want to provide credits cards that fit the needs of everyone

**Impact** - We aim to impact communities and people through our credit cards

**Integrity** - We promise to maintain our vision/mission/values in everything we do



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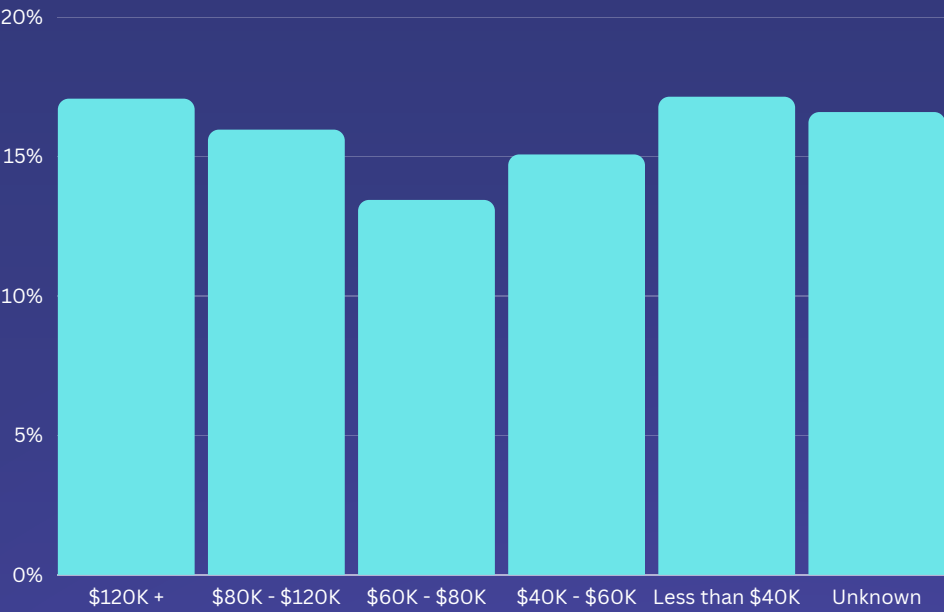
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## INDUSTRY INFORMATION

The digital fintech industry in Canada is booming with the growth of startups such as Neo Financial, EQ Bank, KOHO, and other digital banking providers. The growth of this industry is driven by the ease of banking over the internet, attracting users that wish to skip long lines and in-person banking.

In a research exercise earlier this year, the Data Analytics team compiled various facts and figures relating to people analytics in the digital banking industry. Below are some numbers that was found

### AVERAGE ATTRITION % BY INCOME BRACKET:



Average Attrition by Age Groups						
Age Group	20-29	30-39	40-49	50-59	60-69	70-79
Attrition Rate	7.70%	14.13%	16.99%	17.43%	25.43%	0.00%

AVERAGE ATTRITION RATE	16.01%
AVERAGE TIME ON BOOK	36 MONTHS
AVERAGE AGE OF CUSTOMER	42-50 YEARS

Average Attrition by Education Level	
Education level	Average Attrition Rate
College	15.24%
Doctorate	21.17%
Graduate	15.50%
High School	15.07%
Post-Graduate	17.70%
Uneducated	15.92%
Unknown	16.81%

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## EXHIBIT A: BLUE CHIP CREDIT CARD INFORMATION

A former employee within the Data Analytics team compiled 2022 customer data at the end of the year (attached spreadsheet). The document includes customer demographic data, usage rates, and various other data points.

In addition to employee information, the spreadsheet includes whether a customer left Blue Chip Credit by the end of the year.

SEE ATTACHED: BLUE CHIP CREDIT – ATTRITION DATASET 2022.XLSX



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## EXHIBIT B: BLUE CHIP CREDIT CARD OLD DATA BOLT UBC

### BLUE CARD

- \$2000 Monthly Limit
- Annual Fee: \$50
- Additional Perks:
  - 10% Cashback for first 3 months

### PLATINUM CARD

- \$10,000 Monthly Limit
- Annual Fee: \$200
- Additional Perks:
  - 5% Cashback for all airline purchases

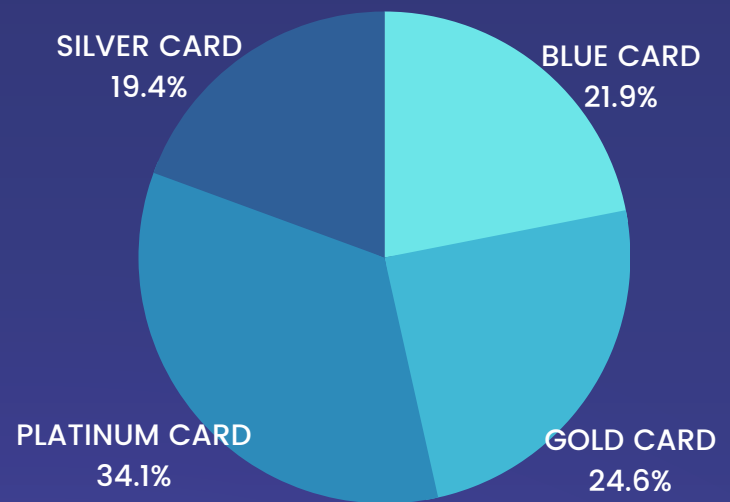
### SILVER CARD

- \$3500 Monthly Limit
- Annual Fee: \$100
- Additional Perks:
  - 1% Cashback for all gas station payments

### GOLD CARD

- \$5000 Monthly Limit
- Annual Fee: \$150
- Additional Perks:
  - No currency conversion fees

### AVERAGE ATTRITION % BY CARD TYPE IN 2020:



## VARIOUS PAST STATISTICS BY CARD (1 YEAR OLD)

	Blue Card	Silver Card	Gold Card	Platinum Card
Attrition %	21.92%	19.41%	24.57%	34.10%
Credit Limit (monthly)	\$2000	\$3,500	\$5,000	\$10,000

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## EXHIBIT C: CUSTOMER REVIEWS

### Review 1:

Demographics: Male, 26, College

Cards Used: Blue

Rating: 2/5

Pros: Great deal for the first 3 months!

Cons: After the first 3 months, I couldn't afford to keep using the blue card.

### Review 2:

Demographics: Female, 37, Graduate

Cards Used: Gold

Rating: 4/5

Pros: Great card for me and my family!

Cons: Some smaller stores near universities don't accept this credit card.

### Review 3:

Demographics: Female, 53

Cards Used: Platinum and Blue

Rating: 5/5

Pros: Since I traveled a lot for work, the cashback was an amazing deal!

Cons: These cards are unknown to my colleagues under 40 years old.



## YOUR TASK

**WHAT CAN BLUECHIP CREDIT DO TO  
DECREASE ATTRITION RATES?**

## PROJECT DETAILS

You don't need to cover everything in your proposal outline! This is just a guide to things you should consider and include in your presentation.

- Explain the current situation, what is the issue?
- How did you analyze the data and how can you visually represent that in your presentation?
- What target demographic should your solution target?
- What conclusion did you reach after your analysis?
- How did you use your data to come up with a solution?
- Describe your solution, how will it fix the problem?
- What is the impact of your solution?
- Describe the risks and how you will mitigate them?
- What is the target demographic and how can it be addressed?
- Should BlueChip Credit change their product/marketing to lower attrition rates
- Should BlueChip Credit change their product to fit the needs of their consumers?

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## ABOUT THE CASE & REFERENCES

THE DATASET USED FOR THIS CASE IS  
MODELED AFTER A FICTITIOUS DATASET  
PUBLISHED BY LEAPS ANALYTICA  
(AMAN CHAUHAN, 2022)

### References:

CHAUHAN, A. (2022, OCTOBER 30). CREDIT CARD CUSTOMERS  
PREDICTION. KAGGLE. RETRIEVED JANUARY 8, 2023, FROM  
[HTTPS://WWW.KAGGLE.COM/DATASETS/WHENAMANCODES/  
CREDIT-CARD-CUSTOMERS-PREDICTION](https://www.kaggle.com/datasets/whenamancodes/credit-card-customers-prediction)



# BOLT UBC BOOTCAMP 2022



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## COMPETITION – CASE DELIVERABLES

### CASE DELIVERABLES

- **SUBMIT YOUR DELIVERABLES AT 11:59 PM PST, FEBRUARY 2ND, 2022**
  - **Naming Convention:** Team <#>.ppt and Team <#>.pdf
  - **File Format:** Powerpoint and PDF ONLY.
    - We recommend you take screenshots of your data analytics takeaways and embed those insights into your presentation.
  - **What to Submit:**
    - **Executive Summary**
      - Summarize your presentation into 100 words max
    - **Presentation**
      - Your slidedeck that you will use to present
  - **Presentation:** 10-minute presentation + 5-minute Q&A

\*Note that your submission at 11:59 PM on Saturday, February 3rd, will be FINAL. No changes are allowed after submission deadline.

**Late submissions will NOT be accepted.**

Teams will be judged on three main categories – data analytics, business recommendation and presentation delivery.

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## COMPETITION – JUDGING PROCESS

Rubric		
Criteria	Description	Points
Problem identification	<ul style="list-style-type: none"><li>• Demonstrates understanding of a relevant problem space, industry, and market.</li><li>• Focuses on a specific problem and identifies the impact of the problem/opportunity.</li></ul>	Out of 5
Creativity of solution	<ul style="list-style-type: none"><li>• The proposed solution is novel and/or original and addresses the problem/opportunity identified.</li></ul>	Out of 5
Practicality and feasibility of the recommendation	<ul style="list-style-type: none"><li>• High-level outline of the solution</li><li>• Team justifies their choices</li><li>• Realistic implementation and launch plan</li><li>• Use of qualitative and/or quantitative data and analysis as support</li><li>• Key milestones and/or metrics of success identified with the solution (KPI)</li></ul>	Out of 8
Data Analytics	<ul style="list-style-type: none"><li>• Data is accurate and used in the solution</li><li>• Identify key insights from the case dataset.</li><li>• Outline of the technical solution/implementation plan</li><li>• 3-5 graphs are provided to better understand the data</li><li>• The data analysis is described and is accurate and efficient</li></ul>	Out of 12
Pitch	<ul style="list-style-type: none"><li>• Pitch is engaging, persuasive, clear, and gives the judges a good understanding of the solution</li><li>• The deck is well designed and easy to understand</li><li>• Questions are well answered and articulated</li><li>• Presentation is no more than 15 minutes</li></ul>	Out of 5



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## COMPETITION – JUDGES

### JUDGES



**Sohaira Sarood**

Manager, Financial Planning and Analysis



**Harsh Sharma**

Senior Technical Consultant



**Garvit Chawla**

Data Scientist



**Dima Bykov**

Manager, Data and Analytics



**Piyush Batra**

Senior Business Intelligence Developer