**Bank Bonus Churning Advisor: A Data-Driven Prototype for Optimizing Bank Bonuses**

**Lana Bracken**

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**West Texas A&M University**

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This Capstone Project demonstrates the application of skills acquired through the WTAMU MS-CISBA program by addressing a real-world personal finance opportunity: identifying and prioritizing bank account bonus offers. The problem involves understanding and comparing dozens of offers, which can be time-consuming and difficult for consumers to evaluate manually. My solution, the Bank Bonus Churning Advisor prototype, uses data analytics, data management, software systems, and cybersecurity principles to recommend bank offers based on user-defined preferences and effort tolerance.

Prior to this project, my experience with the concept of “churn” was exclusively from the business side, where reducing customer churn is critical for long-term customer retention and revenue stability. During multiple MS-CISBA classes, I studied churn models from the corporate perspective. However, I discovered an entirely different application of churn: bank account bonus churning as a personal side hustle.

I first learned about this through The Daily Churn Podcast, where the host reported earning over $45,000 in bank bonuses in 2024 by opening and meeting the requirements of multiple bank account offers. I began exploring this strategy myself, earning over $1,000 last year and am on track to match my 2024 goal of $2,000 by June. I realized this hobby combines data analysis, structured decision-making, and cyber risk management—all of which aligned perfectly with my academic background.

The problem I sought to solve was the lack of any system to collect and objectively rank active bonus offers for a user based on personal effort preferences. That is where the Bank Bonus Churning Advisor prototype came in: to gather offer data from public sources and apply structured scoring logic to recommend the most attractive opportunities.

This project ultimately brought together elements of data management (cleaning raw scraped data and Gemini AI structured text extraction), data analytics (building scoring models to evaluate bonuses by effort and potential return), and software systems (designing a working Jupyter/Colab prototype that integrates the data and analytics into a usable decision support tool). It also touches on cybersecurity as bank churners inherently increase their attack surface by maintaining accounts at dozens of online banks simultaneously.

In future versions, I plan to expand the prototype to include a seed fund optimizer that models the optimal order of account openings and fund rotations, as well as automated tracking of user deposits, transactions, and timelines across multiple accounts to fully support real-world execution of a bank bonus churning strategy.

My project shows how personal finance analytics and structured data can convert a niche hobby into a data-driven income stream.

**Data Analytics**

Data analytics involves analyzing structured information to discover patterns, identifying trends, create models, and generate actionable insights that enable informed decision-making.

**Application in Project**

In this project, analytics is what transforms raw data into meaning. I applied data analytics to design and implement an advisor scoring system that assigns a User Effort Score to each bank offer. Scoring factors include direct deposit requirements, debit card usage requirements, paperwork/documentation, deposit thresholds, and geographic or account restrictions.

The scoring model allows users to filter out high-effort or low-reward opportunities and focus their attention on the most worthwhile offers based on their personal preferences. This use of data-driven scoring represents an important first step toward helping users make informed, structured decisions in the otherwise unstructured and overwhelming world of bank bonus offers. Additionally, I created visualizations, such as horizontal bar charts, to present the User Effort Scores in an intuitive way and further support decision-making.

Courses referenced: CIDM 6308, CIDM 6320, CIDM 6355

**Data Management**

Data management focuses on the collection, cleansing, storage, and preparation of data to enable effective analysis.

**Application in Project**

I viewed this project as a challenge across many areas, but especially in data collection and management, as this dataset had never been organized or structured like the curated datasets I analyzed in prior MS-CISBA coursework. Bank bonus information had always existed in loosely formatted blog posts or user forums, leaving individuals to manually sift through unstructured lists.

The web scraping and field structuring techniques I applied in this project were first introduced to me in CIDM 6351 and CIDM 6355. In CIDM 6351, I learned to extract structured data from web pages using Python libraries such as requests, response, and BeautifulSoup. In CIDM 6355, I learned the value of writing detailed data dictionaries and how to parse complex or composite fields into standardized, structured formats to improve downstream analysis. Both of these concepts were directly applied when preparing and cleaning the bank bonus dataset for this project.

This project expanded significantly on my previous academic experiences. While a digital forensics class had introduced me to basic web scraping, the scale and complexity of this project took it to the next level. I designed a pipeline that scraped data from Doctor of Credit and experimented with Gemini AI prompt engineering to extract structured bank offer details directly from raw HTML content.

One of the most exciting learning moments was teaching myself how to interact with large language models (LLMs). I successfully demonstrated a proof of concept by using Gemini AI to extract structured data from semi-structured web content, at a total experiment cost of just $0.60. This experience provided valuable early exposure to prompt engineering and large model behavior, which I hope to apply further in future iterations of the project.

A key takeaway is that as my research and analysis of bank bonus churning data grows, I hope to contribute to the churning community by encouraging the development of a unified data format or community-maintained data repository to make this information easier for everyone to analyze and use.

The structured dataset (DOC\_Bank\_Bonus\_Cleaned.csv) was standardized to provide reliable input for downstream analysis.

Courses referenced: CIDM 6350, CIDM 6351, CIDM 6355

**Software Systems**

Software systems encompass the design and development of software solutions to solve user problems and deliver value through technology.

**Application in Project**

I developed a reusable prototype in Jupyter/Colab that loads the cleaned dataset, allows a user to define personal effort tolerance (user\_profile), applies an advisor scoring algorithm, recommends offers, and generates a final visual output. The notebook design follows software engineering best practices to create a modular, reusable framework that can be expanded in future versions.

I thoroughly enjoyed working within the Jupyter/Colab notebook environment. It allowed me to explain the project and code much more clearly to the reader and gave me incredible flexibility to test, document, and visualize the system all in one place. I feel that Colab was the ideal platform for developing and demonstrating this prototype because it makes the analytical process highly accessible and reproducible.

That said, I was very mindful of avoiding scope creep. It is easy to get carried away and try to overbuild when you are passionate about a topic—as I am with bank bonus churning. I purposely kept the scope focused on building the advisor prototype and simple scoring engine only.

I also recognize that a notebook-based solution is not a long-term answer. To reach a wider audience and provide an improved user experience, this project will eventually need to evolve into a more polished standalone web or mobile application. This will enable better exposure, easier access, and greater scalability for potential users beyond my inner circle. The design approach of building a flexible, testable prototype that allows for future scalability reflects the software systems principles I learned in the MS-CISBA program.

Courses referenced: CIDM 6325, CIDM 6330

**Networking & Cybersecurity**

Networking and cybersecurity involves understanding risks associated with interconnected systems and mitigating potential threats to protect sensitive information and digital assets.

**Application in Project**  
My Capstone project does not directly implement enterprise-level controls such as authentication, audit logging, or firewall policies. However, I applied a cybersecurity mindset throughout the design process to minimize risk and promote safe practices in data handling and system usage.

I ensured that no sensitive personal data, real bank credentials, or private information were ever collected or stored as part of the prototype. I limited the dataset to publicly available information only. I also intentionally designed the prototype to minimize unnecessary storage or transmission of any potentially sensitive data.

Beyond the prototype design, I reflected heavily on the unique risks faced by individuals who engage in bank bonus churning. This hobby inherently increases personal cybersecurity exposure due to the large number of online financial accounts opened and maintained. Concepts I learned in CIDM 6340, such as the emerging danger of 2FA fatigue attacks, strongly influenced my thinking.

Since completing that course, I have made it a personal mission to educate friends, family, and others I introduce to churning about the importance of strong security practices, including the use of two-factor authentication, password managers, unique passwords, and account segmentation to reduce attack surfaces. I also plan to promote these reminders within the churning community through blogs, forum posts, and communications to help raise awareness of these risks.

Courses referenced: CIDM 6356, CIDM 6340

**Conclusion**

This project demonstrates the successful synthesis of data analytics, data management, software systems, and cybersecurity skills into a cohesive, functional prototype. It represents my journey from concept to execution, applying theoretical knowledge to build a real-world solution. In the future, I plan to expand the prototype with a Seed Fund Optimizer module and explore API integrations to automate bank deposit detection.

Not every project produces groundbreaking new discoveries or transformational results. The important part is the journey itself and what you learn along the way. I am confident that the research, development, and problem-solving I applied in this project has strengthened my skills and will aid me greatly in future projects and professional work. For that, I am extremely grateful.

I also find it rewarding that I was able to take a personal hobby and apply my knowledge from this program to produce something that, to my knowledge, no one else has done before in the bank bonus churning space.

Churning itself has a unique community culture. One of the cardinal rules of churning is: never call or contact the bank unnecessarily. Churners try to avoid drawing attention to themselves, since if too many people start taking advantage of bonus offers, banks may reduce or eliminate them altogether. Currently, churning works well for a small community of people, but if qualification requirements become more difficult over time, I hope future versions of this system can evolve to help churners meet those more demanding requirements.

There is so much more to say about bank bonus churning, and if this is your first time hearing about it in this context, I hope you found this brief introduction both interesting and informative. I am proud of the artifact I have produced as part of my MS-CISBA Capstone and am grateful for the opportunity to apply my learning to something I am passionate about.