



# syncrony



## Introductions – Your SYF Datathon Hosts

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AVP, Voice Solutions  
*Strategy & Transformation  
Technology & Operations*



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VP, Product Owner – IVR  
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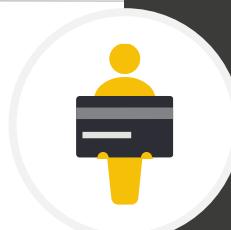
Jay Schwind  
VP, Voice Solutions  
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# Who Is Synchrony?

- As a consumer financial services company, Synchrony is a Fortune 500 and the largest provider of private label credit cards in the US based on volume and receivables.
- We provide credit products through different loyalty programs with a diverse group of national and regional retailers, local merchants, manufacturers, buying groups, industry associations, and healthcare service providers.
- **Specifically, The Synchrony Emerging Technology Center at the University of Illinois Research Park** focuses on advancing Synchrony's finance and technology capabilities as well as providing real-world skills for students in artificial intelligence, data science, human-centered design, and other emerging technologies.



## Retail Card

Partner branded credit cards and loyalty programs for purchases at the places where you love to shop.



## Payment Solutions

Financing for major purchases such as refrigerator—or an engagement ring.



## CareCredit

Financing for elective healthcare procedures, products and services for people and pets.



## Consumer Banking

Award winning, online, consumer bank.

Our partners are a BIG deal. At 380,000+ locations.

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**qurate**  
RETAIL GROUP<sup>SM</sup>

**amazon**

**PayPal**

**Crate&Barrel**

**sam's club** ◃

**Google**

**synchrony**

**LENSCRAFTERS** ❤️👁️

Ashley  
HOMESTORE

**J.CREW**

**PANDORA**

**DICK'S**  
SPORTING GOODS.

**TJX**<sup>®</sup>

AMERICAN EAGLE  
OUTFITTERS



**CareCredit**<sup>SM</sup>

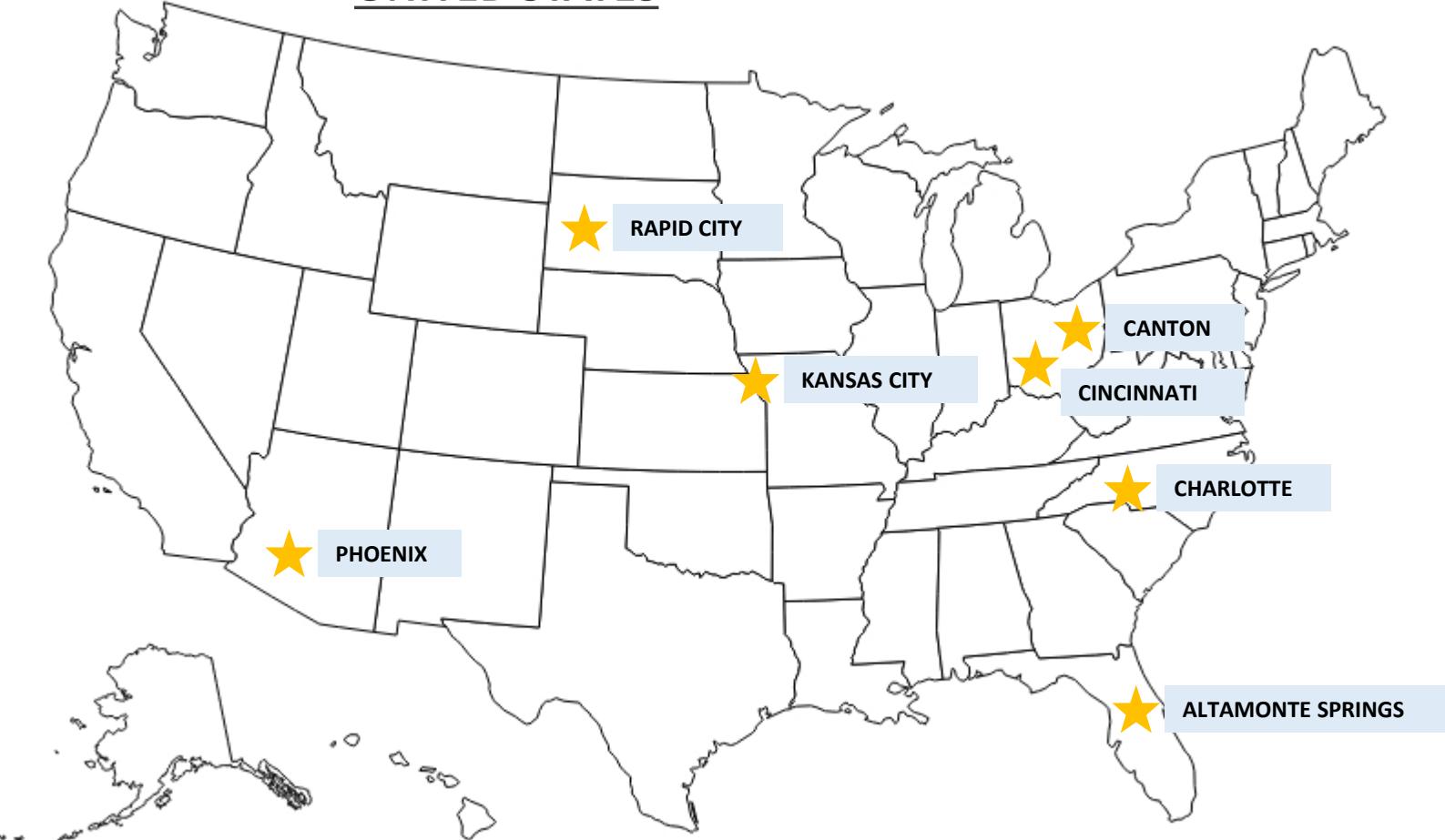
**Guitar Center**<sup>®</sup>

**LOWE'S**

**Walgreens**

# Call Center Locations

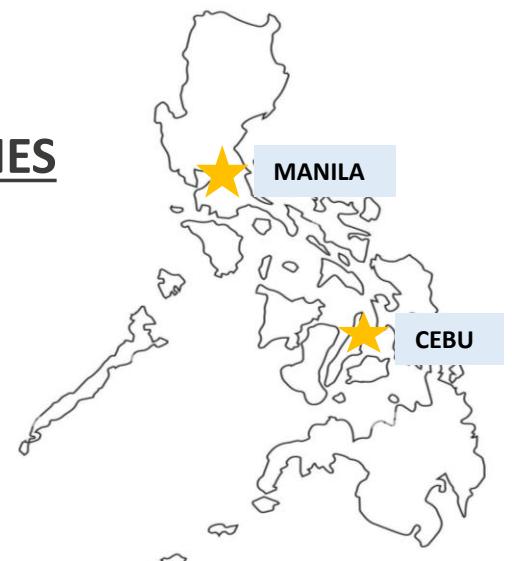
## UNITED STATES



## INDIA



## PHILIPPINES



# Our values



Honest

It's our policy



ASIAN PROFESSIONAL  
ENGAGEMENT NETWORK+

Caring

We believe people  
matter



BLACK EXPERIENCES+

Responsible

We know what's at  
stake



ENABLED+  
NETWORK

Driven

We are all in and we  
deliver



HISPANIC NETWORK+

Passionate

It's our fuel for  
greatness



PRIDE+ NETWORK



VETERANS NETWORK+

Bold

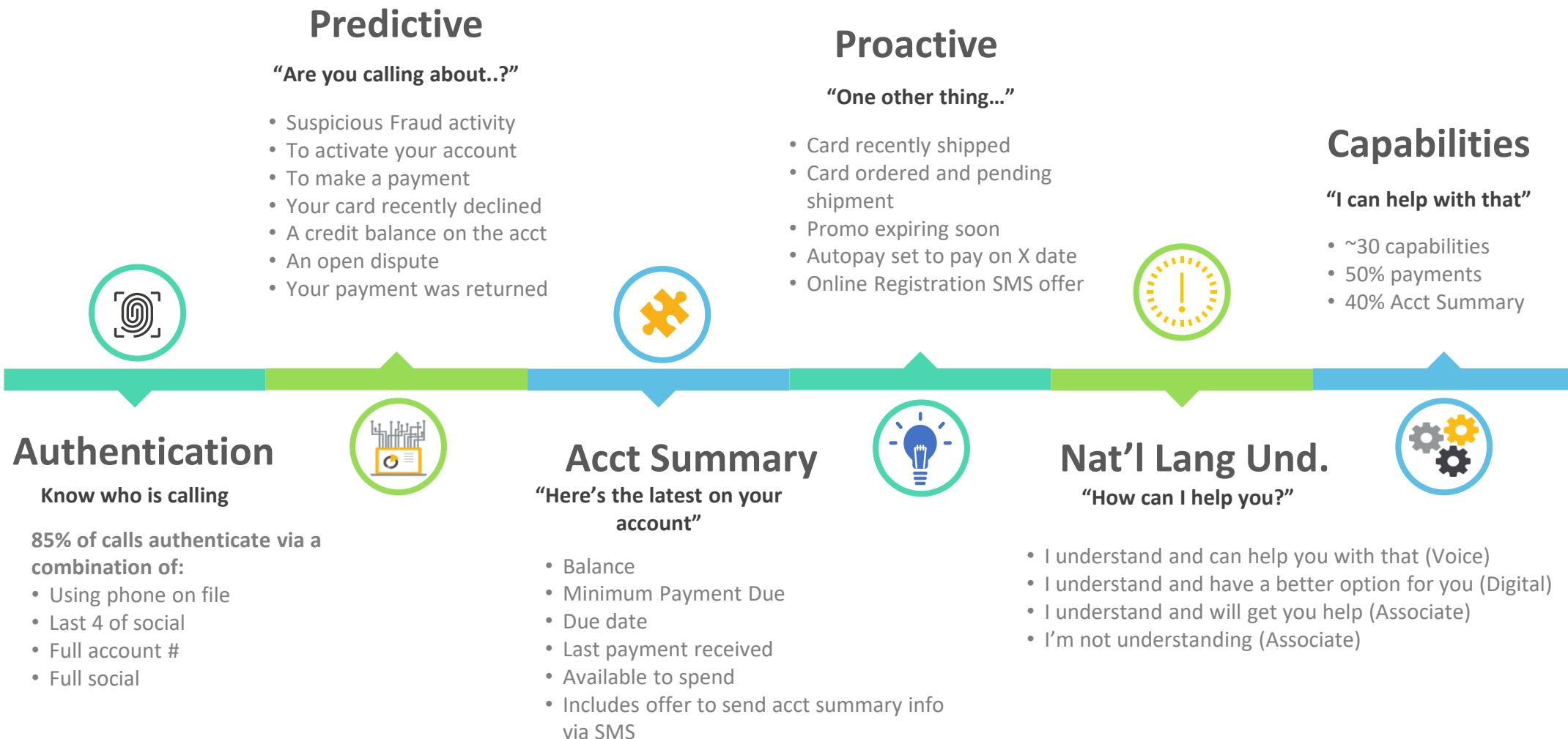
It's time to make a  
difference



WOMEN'S NETWORK+

PUBLIC

**IVR Vision Statement –** Quickly identify who is calling and why, and route them to the destination that can best resolve their inquiry



20 million customer calls into the IVR each month with a 78% resolution rate  
1% improvement saves 200,000 agent/floor calls per month

# Problem Statement

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In this challenge, participants are tasked with analyzing the relations between call attributes and customer call reasons within the IVR (Interactive Voice Response) system with an emphasis on calls that the IVR could not handle (i.e., floor calls). Your objective is to delve into the provided dataset and use the attributes\* to uncover insights:

- Digitally Active (eservice\_ind = 1)
- Number of Accounts with Synchrony
- Account Open Date
- Card Activation Status
- Account Balance
- Account Status
- Ebill Enrolled Status
- Auto-Pay Enrolled Status
- Delinquency History (Current vs. Past Due)

The goal is to complete the following:

1. Analyze and identify attribute associations to customer call reasons within the IVR system with an emphasis on calls that the IVR did not resolve (i.e., calls transferred to agent).
2. Understanding the attributes, their relationship to call reasons, and the IVR's effectiveness to address the call reason, suggest opportunities to improve overall customer experience and satisfaction. We encourage creative approaches in data analysis, visualization, and predictive modeling to address this challenge.
  - Examples of what to improve:
    - Adding functionality to the IVR
    - Preventing a re-call
    - Providing the caller a more effective channel-of-choice

*\*Attribute definitions can be found in the appendix*

## Key Terms & Definitions

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**IVR:** Interactive Voice Response; the voice-based solution when customers call us for help before they get to a CSR.

**Floor Calls:** Calls transferred to a call center agent from the IVR.

**CSR:** Customer Service Rep (Floor) - Agents trained to assist with requests that the IVR could not complete.

**Digitally Active Customer:** Customer who is enrolled in e-service and has access to the online servicing platform.

**Delinquency:** A loan becomes delinquent when the required minimum payment is not provided by the contractual (payment due) date.

**Call Containment (Resolution):** Measurement for how effective the IVR is at handling the customers call or resolving the customers' issue. A call which is contained or resolved does not need to transfer to a CSR for additional handling.

**MOS:** Menu Option String; the audio "functions" that a customer was played during the call represented as two characters.

**Transferred Calls:** Any call that did not hangup in the Customer Service IVR. This means it could have transferred to another department, IVR or CSR. You will see transferred calls that can be notated as resolved or floor.

**Authentication:** Step during identifying the customer account in the IVR. For Authenticated customers we have located an account, and the customer has proven to us that they are authorized to access account information. Un-authenticated callers have limited functionality in the IVR as we do not have access to the account record/details.

**Re-call:** Call is considered a re-call if the customer calls the IVR back again within the same day. Identified in call data where serial number is duplicated.

**Disambiguation:** Clarifying response used in the IVR to determine if we have the correct intent i.e. "Are you calling about X"

# Deliverables

## 1. Max 7-Minute Video

- Sell us your recommendations and approach in an elevator – what did you learn and why should we be interested?
- Unlisted YouTube link sent in a Readme file

## 2. Presentation

- You will provide an overview of your unique recommendation to the problem including *which* attributes and call types provide the best opportunity to improve the customer experience and IVR performance.

## 3. Association Results

- Show us any patterns or relationship amongst the various attributes, call reasons and IVR result.
- Determine how these attributes relate to call reasons and the IVR's effectiveness in addressing the call reason.

## 4. Solution

- Suggest opportunities to improve overall customer experience and satisfaction. We encourage creative approaches in data analysis, visualization, and predictive modeling to address this challenge.

## Judging Criteria

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All deliverables will be taken into consideration during judging. The following criteria will be on a 5-point scale and will be weighted equally.

MATERIALITY	METHOD	PRESENTATION
<ul style="list-style-type: none"><li>▪ Based on the addressable opportunity of the recommendation</li><li>▪ Impact to performance (moves the needle)</li></ul>	<ul style="list-style-type: none"><li>▪ How did you derive at the conclusion?</li><li>▪ Explainable approach</li><li>▪ Solution addresses given business problem</li><li>▪ Innovative approach</li></ul>	<ul style="list-style-type: none"><li>▪ Engaging presentation</li><li>▪ Creativity / arrival to solution</li><li>▪ Clear, thoughtful explanations</li><li>▪ Supportive visualizations</li><li>▪ Sandia will be awarding a prize based on best visualizations</li></ul>

Judges will include IVR Leadership Team and Head of Strategy & Transformation at Synchrony.

## Suggestions & Guardrails

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- We are not seeking a forecasting model to know how many calls we're going to receive.
- While floor calls are the most expensive, and we do want to increase ways to improve self-service, it is also important to know differences in the attribute correlation to "resolved" call types.
- 45% of IVR call types are payments and we handle those well. Additionally, several callers get the needed details in our account summary (aka default balance), and those are handled well. It's everything else that is interesting and puzzling.
- Think about the following question when tackling the problem statement – what data patterns did you find interesting?
- Finally, a good pitch combines data, storytelling, and awareness of the business goals.

## Video Submission Criteria

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- A 7-minute (MAXIMUM) pitch video
- Can be structured however you would like to showcase approach/results
- Highlight key points for data association
- Pitch your solution in a creative and informative manner
- Incorporate what you have learned during this process both technically and socially (i.e., working with a team and your SYF hosts)
- Only 1 person is required to be in the video
- Create an unlisted YouTube video and provide link in a Readme file with submission package

## Rules

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- All teams must submit to the Box by 4:00 PM on Sunday. No exceptions will be provided.
- Any submission without all 4 deliverables will not be counted. No more than one video responding to each deliverable is required.
- We are looking for clarity and ability to solve both business and data science questions together and not for flashiness of submissions. Work on what counts.
- Teams are not allowed to ask anyone outside of mentors or their own team for help. Please do your own work as this is a learning opportunity first and foremost.
- Be courteous to your team members and other teams as you work.
- Have fun and get to know your peers and mentors!

# APPENDIX



## Attribute Definitions

Attribute	Definition
delinquency_history	36 month delinquency history for the account. First byte is the current due stage at cycle, second byte is the prior due stage at cycle. <b>0</b> indicates current, <b>1</b> – one payment past due, <b>2</b> – two payments past due.
account_open_date	Date the account was opened
account_status	Status of the account; <b>A</b> - Authorization Prohibited (open but on hold), <b>B</b> - Bankrupt (closed), <b>C,E,F,I,Z</b> -Closed, <b>L</b> , <b>S</b> - Lost or Stolen (new account # issued), <b>Blank</b> (null) Open no restrictions.
card_activation_status	Relates to the status of the plastic card. <b>0</b> - Activated, <b>7</b> - New Account number not activated, <b>8</b> -Same Account number not activated <b>9</b> - Activated today (pending)
eservice_ind	If an account has enrolled for e-service and is digitally active; <b>0</b> -Not enrolled in e-service, <b>1</b> -Enrolled in e-service
ebill_enrolled_status	Indicator how statement will be presented; <b>Blank</b> paper statement only, <b>B,D,L</b> both paper and electronic statements, <b>E</b> electronic statement only
auto_pay_enrolled_status	If account is enrolled in automatic payments <b>0</b> -Not enrolled in automatic payments, <b>1</b> - Enrolled in automatic payments.

## Attribute Definitions

Attribute	Definition
timestamp_call_key	Date and time format when the customer called Synchrony.
retailer_code	Tokenized representation of a Retailer/Partner
serial	Tokenized represenatation of Account Number
mos	Menu Option String; Steps/Functions played during the call. <b>See Excel Table</b>
resolved	If the call went to a customer service agent for further assistance, or customer hung up
no_of_accounts_with_syf	Number of accounts customer has with Synchrony (both open and closed)
account_balance	Current month balance amount
call reason	Our estimation for reason of call (most likely MOS key item before TR)



MOS Key Table

# ETC (Emerging Tech Center)

70+ Interns Across SYF Tech Center Program

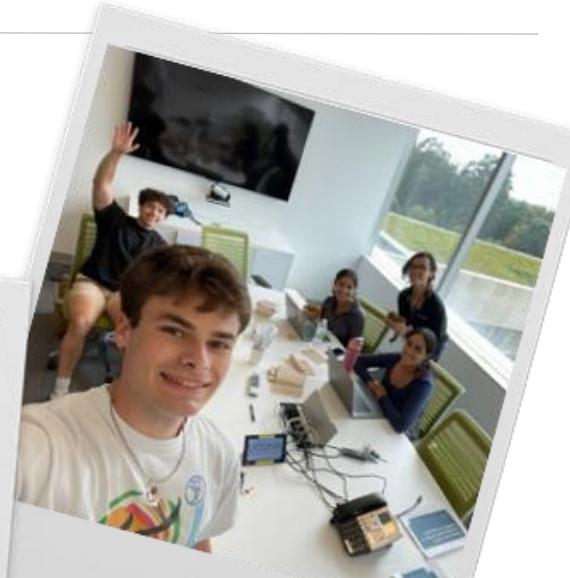
96% Semester-to-Semester Intern Retention Rate

116% Intern Cohort Growth Over Last 4 Semesters

Our ETC is **dedicated** to enhancing Synchrony's financial and technological capabilities

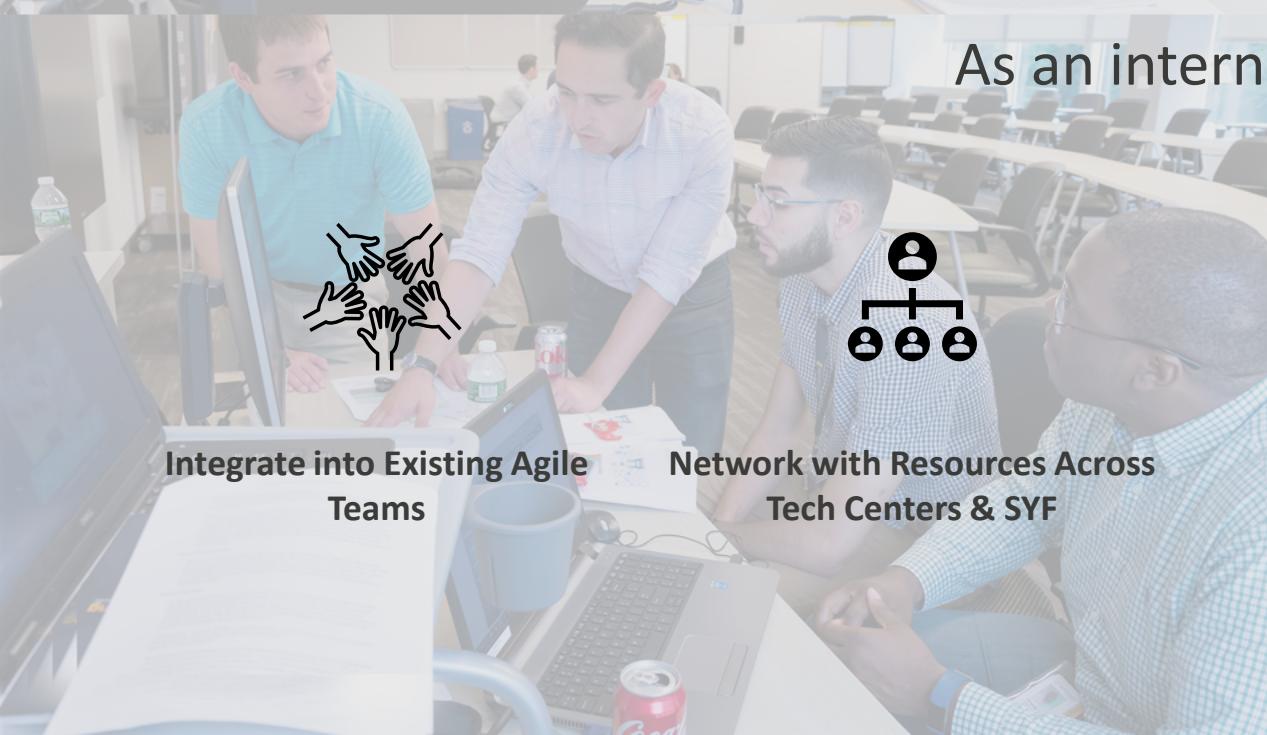


UIUC University Research Park  
HQ: Stamford, CT





Our teams combine technology and analytics to stay ahead of emerging trends, then deliver **INNOVATIVE SOLUTIONS.**



As an intern you will



Integrate into Existing Agile Teams



Network with Resources Across Tech Centers & SYF



Professional Development Opportunities



Continued Relationships & Support

## Why Datathon

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Our **goal** is to promote our brand while investing in students by sharing our resources to foster innovation and collaboration

- Helps connect us to students from different backgrounds that align with what we do.
- Key part of our recruitment strategy that starts with our interns at the ETC that feed into our Business Leadership Program and to our full-time pipeline

The collaboration in our education & internships accelerates Synchrony's:

- ❖ Product Development
- ❖ Coding & Software Engineering Skills
- ❖ Expertise in User Experience (UX) Design

Datathon gives students the opportunity to explore and work on real world challenges and to be able to solve and present them to our company. This also helps prepare students for their future careers.