



COMMUNITY
MANAGEMENT
SUMMIT

How to Use Machine Learning, Live Telemetry Analysis, and Computer Vision to Manage Communities

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Showdown.cc

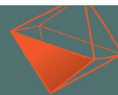
GDC

GAME DEVELOPERS CONFERENCE® | MARCH 19-23, 2018 | EXPO: MARCH 21-23, 2018 #GDC18





Where are your players interacting with one another?





Do In-Game Communities Really Matter?

Player engagement has become as important as the gameplay itself. And for games whose success depends on engagement and retention, **enabling in-game interactions is crucial.**

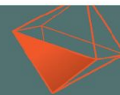
- Enabling in-game social interactions keeps players **in the game** and **more likely to spend**

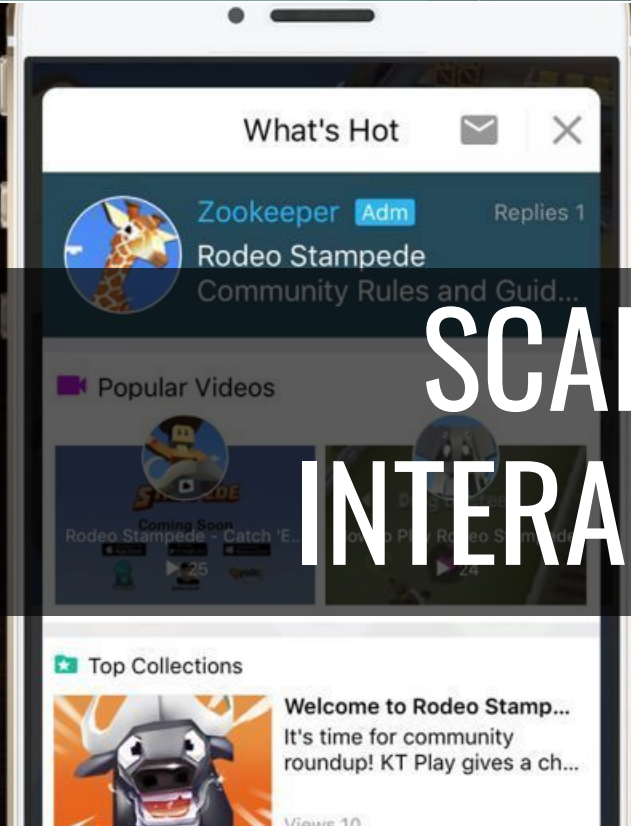
Socially engaged players are worth three times more than regular players - AppAnnie



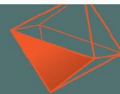
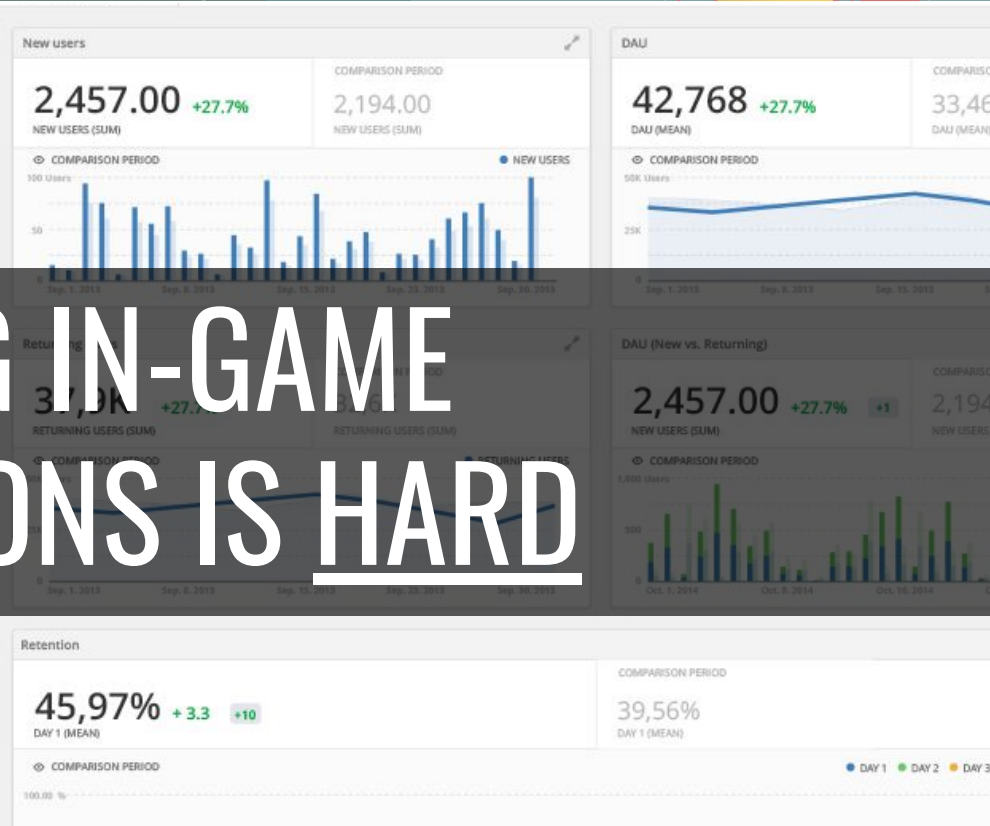
Clash Royale is the front runner of this generation.

Yet **most studios can't deliver** this kind of experience.





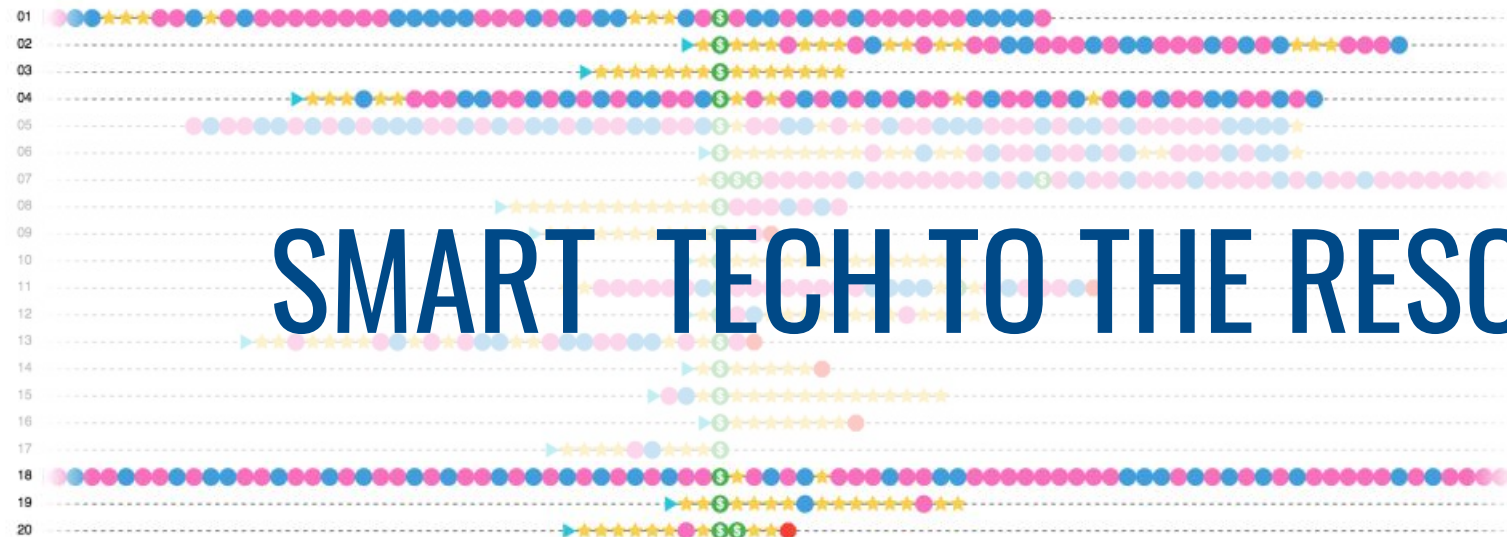
SCALING IN-GAME INTERACTIONS IS HARD





Time Sequence 2 hours 1 day 7 days 28 days Select... Reset

Player Spent any



SMART TECH TO THE RESCUE

Google Play Games Player Analytics

Clear All

Player criteria ?

Search...

Spend (in-app purchase) occ... X

Clear All

Custom events ?

First entered X

First victory X

Clear All

Predefined events ?

Search...

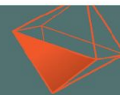
Achievement unlocked X

Churned X

Spend (in-app purchase) occ... X

Started playing X

Clear All





Impacting the Game by Understanding Users

We interviewed Community Managers from tier-one studios who became involved in shaping the product.



Not a new
Analytics
Tool



Increase player engagement backed with clear ROI data => **SOCIAL FLOWS**



- Keep a finger on the community pulse
- Prevent churn
- Increase conversion to paying
- UGC for social media & video ads
- Build a sense of community



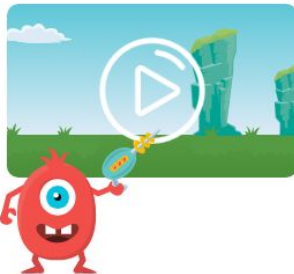


Showdown: Automating In-Game Communities

Showdown was a game engine plugin and SAAS platform for game developers that generated event-driven gameplay videos to build in-game social loops.



Bob wins a battle

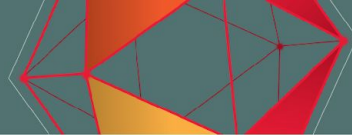


A video replay is generated



Other players see Bob's video and learn a new strategy.





Social Loops: The Heart of In-Game Communities

Social loops that are tied to your game mechanics create opportunities for the components required to build a sense of community:

1. Reinforcement of needs
2. Membership
3. Influence
4. Shared emotional connection

CROWD → GROUP → COMMUNITY

McMillan, D.W., & Chavis, D.M. (1986). [Sense of community: A definition and theory](#). *Journal of Community Psychology*.

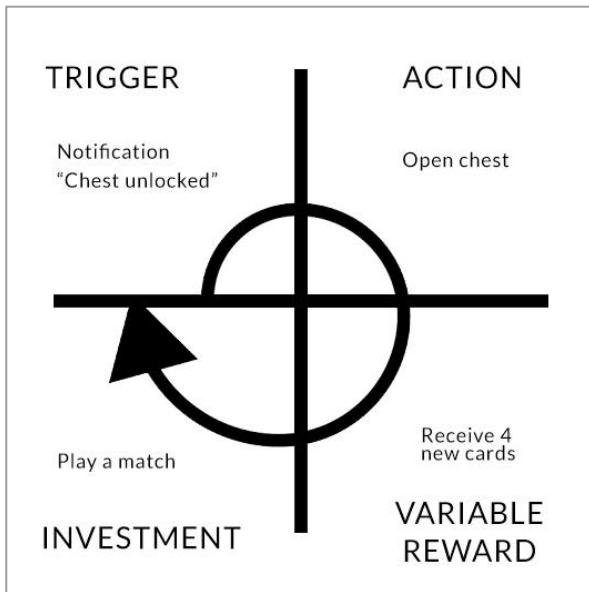




Social Loops (Cont.)



Game Hook



Social Hook





The Showdown Tech Stack



Telemetry

Analyzes real-time gameplay events to identify potential highlights.



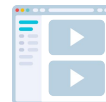
Video Production

Analyzes and assembles the highlights, sends the video segments to the cloud for processing, and a replay is generated.



Social

Controls content distribution within the player base and enables an in-game social graph.



CRM

Identifies and keeps tabs on players and content. Community & targeting platform for community management.





What are Telemetry and Machine Learning?

Telemetry is any data generated by a player while playing a game.

So much data (think TB/day for a finished game) is overwhelming.

Why does it matter?

Analytics data lets you create conversion funnels and track success. Gameplay data helps you profile your users holistically.

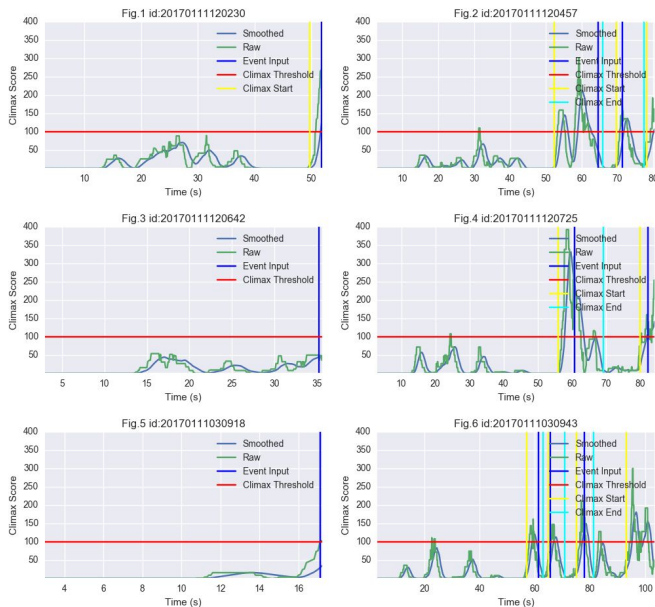
Machine learning are systems that are taught to interpret data.



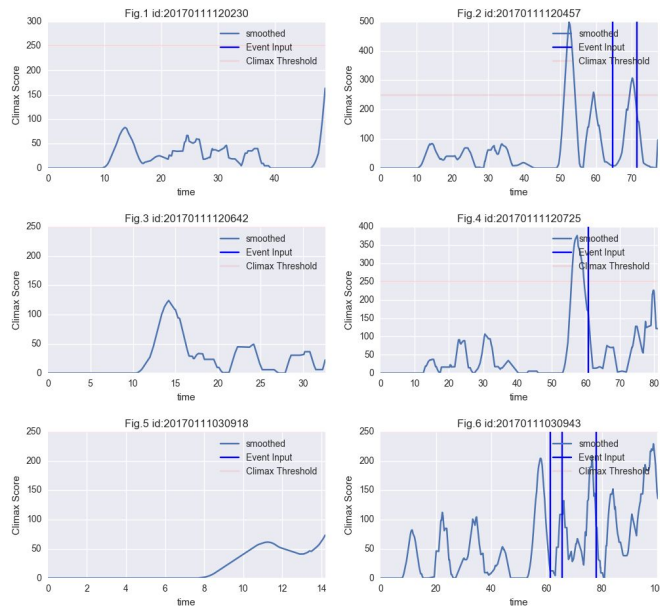


Interpreting Telemetry: How AI Perceives Gameplay

Climax detection



Climax Peak Detection - With Damage value





Measuring A Community's Health

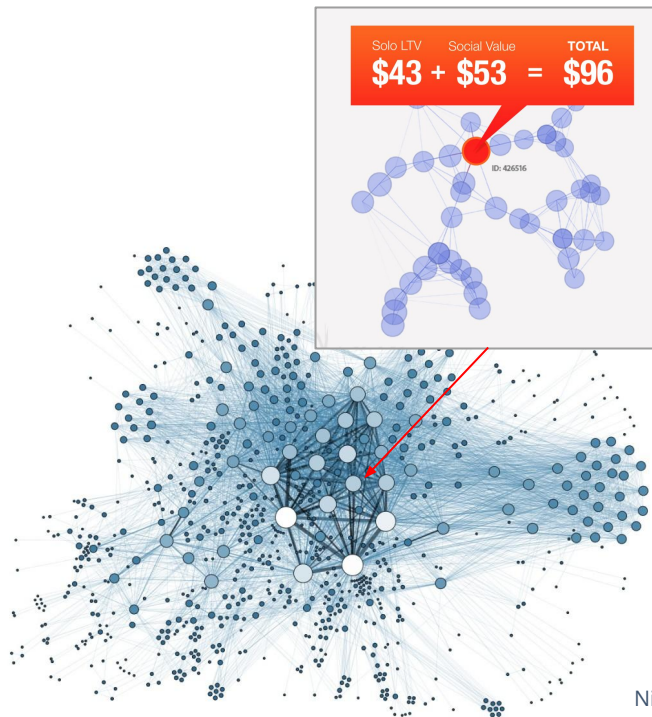
Traditional Metrics

Referrals
Growth
Engagement



Enhanced Metrics

Network Density
Social Value



Ninjametrics





Practical Application: True Skate

Community enablement:

- Connect players with peers when they repeatedly fail - or when they outperform them

Highlight identification:

- Identify important moments (big combo, difficult tricks)
- Identify when a trick went sideways... or keeps failing





Social Loop Design

Objective:

Enable automated peer assistance

True Skate - Social Loop





Integrate SDK within rendering engine

Android: Capture from OpenGL

```
When setting the GLSurfaceView.renderer, you should encapsulate it  
in the ShowdownGLWrapper:  
glSurfaceView.setRenderer(new ShowdownGLWrapper<rendererWrapper>());
```

iOS: Capture from OpenGL

```
Instead of inheriting GLKViewController, you should inherit  
ShowdownGLViewController
```

Define how to capture audio within audio renderer

```
recorder->AddAudioBuffer(buffer, nbSamples);
```

Android: Add callbacks in all activities for webviews and share

```
//MainActivity.java  
  
import com.actvt.showdown.plugin.Utils;  
  
public class MyActivity extends Activity {  
    ...  
  
    public static Activity getInstance() {  
        return instance;  
    }  
  
    public static void showWebView() {  
        Utils.showWebView(instance);  
    }  
  
    public static void showPreview() {  
        Utils.showPreview(instance);  
    }  
  
    public static void shareFile(String path, String mime_type){  
        Utils.shareFile(instance,path,mime_type);  
    }  
  
    public static void shareText(String text){  
        Utils.shareText(instance,text);  
    }  
}
```





During the game

The frames are recorded through a ring-buffer. When great moments are identified, the video is captured as MP4.

To leverage the smart identification of the best moments, events must be sent to the SDK

```
Showdown::SimpleClient::GetInstance().SendEvent("trick_name", trick_score);  
Showdown::SimpleClient::GetInstance().SendEvent("failed trick_name", trick_score);
```

Note: the identification of moments requires several thousands of events to be recorded before it is efficient.

It is possible to record events without recording the video to help kick-start the model.



The player can customize his edits.

List moments and get thumbnails:

```
for (int i = 0 ; i < current_edit.Size() ; ++i)
{
    // Get a thumbnail for the rush
    current_edit[i].GetThumbnailPath();
    // Check if the rush is enabled
    current_edit[i].IsEnabled();
}
```

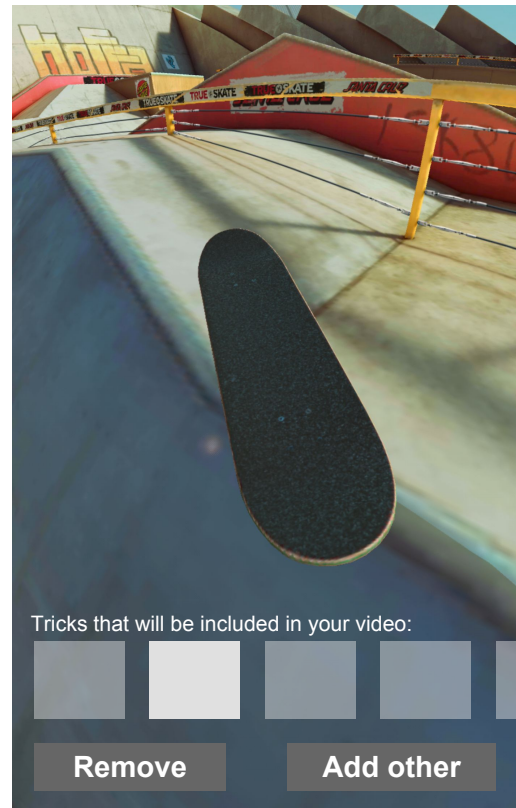
Enable/Hide some moments:

```
// Update the edit
current_edit[i].SetEnabled(false);

// Display a spinner and regenerate the preview
current_edit->Preview(onPreviewSuccessCallback, onFailureCallback);
```

To reorder moments:

```
current_edit.MoveRushTo(idx_src, idx_dst);
current_edit.SwapRushes(i, j);
```



Publish

In order to publish to Instagram, it is necessary to generate the final video, download the generated MP4 and share it using the system share sheet. All this can be done with the following code:

```
current_edit->Publish("", true, onPublishSuccessCallback, onFailureCallback);

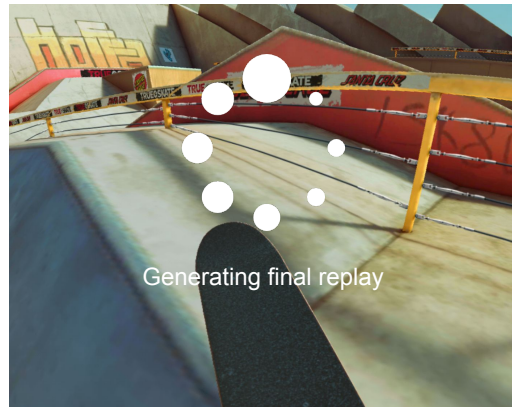
// Show a wait spinner

void onPublishSuccessCallback(Showdown::Video &video)
{
    // Once published, a new recording must be created.
    Showdown::SimpleClient::GetInstance().NewRecording();
    Showdown::SimpleClient::GetInstance().Pause();

    // Open the share sheet
    video.ShareVideo(onShareSuccess, onFailureCallback);
}

void onShareSuccess()
{
    // Hide the wait spinner
}

void onFailureCallback()
{
    // Hide the wait spinner and display an error
}
```



Partager avec Instagram

UNE SEULE FOIS TOUJOURS

Utiliser une autre application



Messenger



Message Privé



Last summer as we began working with customers we joined Blacknut to apply our technology to their product and stopped offering it to third parties.

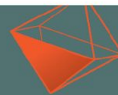
Since then, over the past year, we've seen our findings pop up in projects from major developers and GAAS solutions



NinjaMetrics®



PLAYFAB





Takeaways

- Your players are your number 1 asset - investing on them is your best bet.
- You want them IN your game.
- You already have tons of data on them - it's not that hard to extract simple insights and use them.
- Social loops are the community manager's responsibility - they matter just as much as the game loops.





What we're up to now:



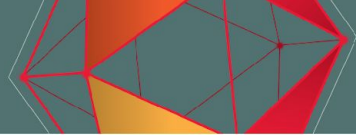
The blockchain network for cross-game
inventory trading.

We need CMs!



Personalized game streaming service
(Netflix for games)





Showdown

Questions ?

