Emerging Leaders of Gaming Webinar Series

Machine Learning in Practice: Applications for the Gaming Industry

Please stand by.
Webinar will begin at 1:00 p.m. EST

Presented by:
Brief Technical Overview

Marie Casias
Manager, Marketing & Administration
The Innovation Group
Windows & Control Panel

- Once we are broadcasting, your screen should show the panelists’ camera windows and a PowerPoint presentation window, as well as the control panel on the right.

Need Help? Call 877-582-7011
Expanding Windows to Full-Screen

- Hover over the bottom right corner of any window and you’ll see the “enlarge” option with two pointing arrows. Click on that, and you’ll go to full-screen for that window. To get out of full-screen, hit ESC or the double arrows again.
Minimize/Maximize Control Panel

- Your control panel starts in an automatically maximized setup but you can minimize it by clicking the orange arrow at the top.
Ask a Question

- We will reserve 10 minutes at the end of the webinar to field questions. Please make sure your control panel is maximized and type yours into the “Questions” field towards the bottom, then hit SEND.
Attending via Mobile Phone?

- Your menus are at the bottom. Toggle between cameras and the presentation (“handout”) by swiping left & right. Continue through the presentation by swiping down. Although you won’t be able to see our live presentation, you can follow along at your own speed in the “handouts” section.

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Frequently Asked Questions

- **Technical Issues?** Call Customer Service at 877-582-7011 (or internationally, +1 805-617-7370)
- A recording of the webinar will be provided within a few weeks of it, and available on our Emerging Leaders page.
About Our Panelists

**Brian Wyman, Ph.D.**  
*Senior Vice President, Operations & Data Analytics*  
The Innovation Group

Brian is an analytics and data science executive with over a decade of experience transforming data into actionable intelligence, insights, and ultimately bottom-line results. He holds a Ph.D. in mathematics from the University of Michigan and specializes in advanced modeling and predictive methods, which he uses to develop creative and innovative ways to improve financial performance. Brian’s career has spanned industries ranging from hospitality to finance.

**Luis Serrano, Ph.D.**  
*Head of Content, Artificial Intelligence & Data Science*  
Udacity

Luis is a machine learning professional, educator, and mathematician. He leads the content creation team at Udacity for artificial intelligence and data science. He previously worked as a machine learning engineer at Google, in the team that creates and maintains the YouTube recommendations algorithm. Luis has a Ph.D. in mathematics from the University of Michigan, and a postdoctoral fellowship from the University of Quebec.
Artificial Intelligence and Gaming

Luis Serrano, Brian Wyman
What is Machine Learning?
It is common sense, but for a computer.
Classification
E-mail spam classifier

Spam

Buy, l0ts of money, now, che@p buy buy free viagra

Non-spam (ham)

Hello grandson, I made cookies. Love, Grandma

‘buy’ spelling mistakes
Rule 1: If #appearances of the word ‘buy’ > 2, then spam

- Appearances of the word “buy”
- Ham vs. Spam
Rule 2: If \#spelling mistakes > 3, then spam
Rule 1: If #buy > 2, then spam

Rule 2: If mistakes > 3, then spam

Rule 3: If mistakes > 3 and buy > 4, then spam

Rule 4: If mistakes + buy > 6, then spam
Classification goal: split data

Ham

Spam
Classification in Gaming

- Will a player play in a certain time period / respond to an offer?
- Anomaly detection – “Is my machine broken?”
- Feature extraction / finding look-alikes
Classification
Regression
Clustering
Housing Prices

House 1
1 room
$150K

House 2
2 rooms
$200K

House 3
3 rooms
???
$250K

House 4
4 rooms
$300K

House 5
5 rooms
$350K
Regression goal: approximate data
Regression in Gaming

• Predicting volumes / necessary staffing when there is inclement weather
• Understanding the “real estate” premium on the floor
• Predicting a game’s (or floor’s) daily coin-in
• Understanding relationships between guest survey questions
• Evaluating marketing campaigns
• How many times will a player come in? / At what worth?
Classification
Regression
Clustering
Customer Segmentation

Goal: To make 3 marketing strategies

Age (in years)

Engagement with the page (in days/week)
Strategy 1:
- Age: 18, Eng. 3
- Age: 20, Eng. 4
- Age: 23, Eng. 2

Strategy 2:
- Age: 37, Eng. 7
- Age: 40, Eng. 6
- Age: 42, Eng. 7

Strategy 3:
- Age: 49
- Age: 51

Age Engagement (times/week)

20 30 40 50

Engagement (times/week)

7 6 5 4 3 2 1
Clustering goal: group data
Clustering in Gaming

- Marketing offer bundling
- Gaming floor layout – banking
- Guest segmentation
Audience Q&A
Please take our survey after this webinar.

Also, visit our website to join our mailing list, follow us on social media, or see videos of our past webinars.

theinnovationgroup.com