

Application: 5157

Using Marketing Science to Solve for Labor challenges

Page: General Information

Provide information about the company to be considered for the award. If you will be nominating an individual, specify the nominee's employer.

Name of Organization/Company

Amazon

Additional Contacts

I would also like to have others receive emails about the disposition of our entries.

Page: Entry Information

Entry Title

Using Marketing Science to Solve for Labor challenges

Category

A03. Technical Innovation of the Year - Advertising, Marketing & Public Relations

Technical Innovation of the Year Submission Format

Written Answers

a. Briefly describe the organization that achieved the nominated technical innovation: its history and past performance (up to 200 words). Required

Amazon.com, Inc. originally started as an online marketplace for books, but today the company sells everything from books to groceries to shipping container houses. Tens of millions of items on Amazon are eligible for two and three-day shipping, and up to three million items are eligible for same-day shipping in as fast as five hours after customers place their orders. The backbone of this massive undertaking is Amazon's amazing workforce of more than a million associates, who are responsible for picking, packing, sorting, and delivering these packages on time.

Intelligent Talent Acquisition (within Amazon) exists to remove business complexity and staffing risk through data, products and insights. We build products, create science models, and generate insights that optimize staffing performance, labor planning, funnel throughput, and candidate placement for both Tier 1 Associates (i.e. Fulfillment Center and Sort Center workers) as well as Corporate Hires. The science models and products mentioned below primarily help with tier-1 associate candidate generation for Amazon warehouses.

b. Outline the nominated technical innovation. Be sure to describe it in terms that someone with limited knowledge of the technology can understand and appreciate (up to 250 words). Required

Amazon's hiring operations were hampered by a fragmented data landscape and decentralized decision-making processes. This made it difficult to spot patterns, leading to decisions being made on stale information. Several individual market experts were involved in manual, judgment-based marketing spend decisions across different regions. Additionally, the absence of automated mechanisms and ML models to optimize job posting and gating patterns negatively impacted the candidate experience.

To support the hiring of hourly workers at Amazon warehouses, ITA built a comprehensive suite of intelligent tools and systems (with marketing at the core) to streamline the entire candidate generation process.

The first step was to leverage ML models to identify risk (of fill) and then use that signal to act on a specific set of sites. ITA built an in-house media mix model which is an analytical approach that uses historic information, such as weekly marketing activity, applications, marketing spend and labor order, to quantify the true incremental impact of marketing. These models come up with highly tailored recommendations by site, changing the marketing-mix and cost per application (CPA) caps based on the variation in labor order and what time of the year it is (seasonality).

Thousands of such recommendations (across locations) are sent daily through our execution arm (marketing campaign automation system) directly to the vendors - including job boards, paid search, display and social media to source high quality candidates. This unique implementation of a marketing mix model to send near-real time recommendations to vendors showed a massive impact on marketing costs.

c. Explain why the technical innovation you have highlighted is unique or significant (up to 250 words). Required

Labor demand, both from Amazon and its competitors, is outpacing labor supply in key markets within North America, the European Union, and Japan. As populations age and Amazon strives to deliver more products in less than 24 hours, this problem will only grow.

The challenge is compounded by the immense scale and precision with which Amazon must operate. With thousands of sites in North America and Europe, and hundreds of thousands of hires a year, Amazon is one of the world's largest private employers. Amazon also navigates an uncertain labor order landscape that can change significantly and only locks within a 3-week window, requiring the company to solve for labor needs ranging from a few hundred to tens of thousands of workers a week. Failing to do so risks disrupting Amazon's ability to meet its delivery commitments.

To measure the impact of our in-house marketing mix models and to drive adoption, they were launched in phases through rigorous experimentation (with control sites using business-as-usual BAU rules to activate marketing).

Overall, we saw CPA (cost per application) decreased by 65% in sites where MMM recommendations were implemented vs synthetic control (our counterfactual that helps us understand what would have happened without MMM). This reduction in CPA has been achieved without any decrease in fill-rates suggesting that our models were able to cut down on marketing spend that wasn't driving incremental applications and hires. We saw similar results across phases with variations across regions suggesting that the models were hyper-localized by site.

d. Reference any attachments of supporting materials throughout this nomination and how they provide evidence of the claims you have made in this nomination (up to 250 words). Optional

Attached document contains a chart with more clear results.

Webpage Link

Would you like to add an additional webpage link?

No

Supporting Document

Download File (https://stevies-tech.secure-platform.com/file/67990/eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJtZWVpYUlkIjo2Nzk5M0cwYXN3b3dOb3RTaWduZWVcmwiOiJGYWxzZSIsImlnbm9FdWMyBwZuRMOzYU0I_HbDYQjqnw?Stevie%20Awards%20Final.pdf)

Would you like to add an additional supporting document?

No

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