

# Anna - A Database Driven Chatbot For the Merchant

Anna is a Chatbot-Based Math Recommendation System Developed on an Amazon Web Services (AWS) Proprietary Platform to support AWS Sellers

**Author**  
Devrin Chullanandana

**Affiliations**  
University of Washington, Tacoma (Mathematics)  
Amazon Web Services

**Advisor**  
Dr. Julia Eaton



## Introduction

In my sales internship at Amazon Web Services (AWS), I surveyed five managers, five Inside Sales Reps, and 10 Demand Generation Reps (DGRs) across the United States in AWS Sales. According to my surveys, 30-50% of piped-in Salesforce data by DGRs is incredulous. The result can be attributed to a few factors: 1) DGRs not receiving the right training; and 2) DGRs focusing too much on hitting metrics rather than insisting on higher standards - a major leadership principle at AWS.

## Objective

The purpose of my research was to dive deep into the sales data of Amazon Web Services and create a tool that would globally enforce clean sales data in the system.

## Methodology

I conducted 30-minute interviews with five managers, five Inside Sales Reps, and 10 Demand Generation Reps (DGRs) across the United States in AWS Sales. Each interviewee desired a tool that can coach their interns to make better decisions in inputting sales data. Creating a coaching bot only required AWS' proprietary Chatbot to make recommendations and a new library.

## Results

30-50% of piped-in Salesforce data by DGRs is low quality: meaning that DGRs were not evaluating data opportunities through all of the AWS sales standard criteria. I worked with AWS engineers to develop a Chatbot that used a database of validations/fields described by the sales managers I interviewed..

## Analysis

Anna chatbot uses basic level Artificial Intelligence that asked the user to type a question. Anna parses through a database of content for keywords in the question and returns back with an appropriate linked resource/further questions if Anna is confused. Although basic, this chatbot was effective in answering questions of sellers at Amazon Web Services. Additionally, we developed Anna with continuous improvement in mind by tracking insights about: total unique users by region, total Anna interactions, total interactions by region, Anna's top asked categories; Anna's total knowledge base; and Anna's top users.

## Conclusion

After the development of Anna, our team was able to determine the major topics of confusion for sellers: 1) Billing, 2) SFDC (Salesforce Developer Community) Accounts and Oppty Management, 3) Sales Compensation, 4) Tools 5) New Hire and Onboarding. This provided the developers with a better idea of which topics to focus more resources on. Our team linked the Chatbot with even more resources

## Related Literature

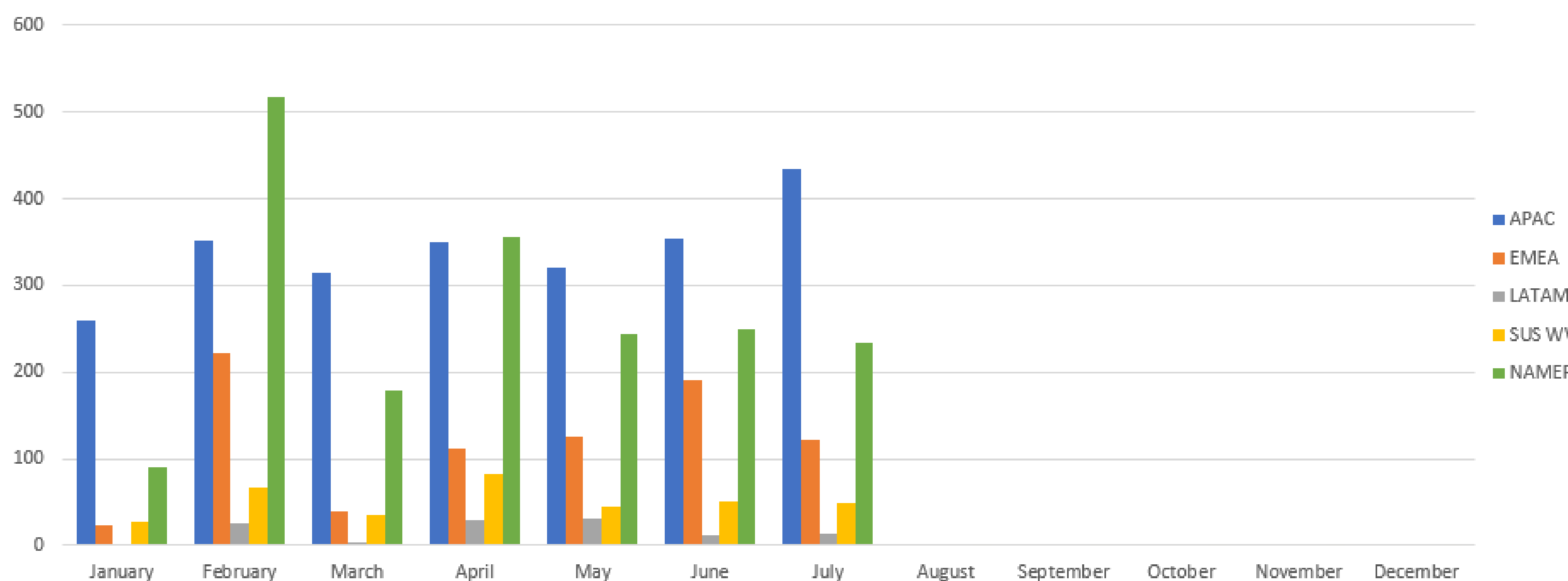
Wollny, Sebastian, et al. "Are We There Yet? - A Systematic Literature Review on Chatbots in Education." *Frontiers in Artificial Intelligence*, vol. 4, 2021, <https://doi.org/10.3389/frai.2021.654924>.

Caldarini, G.; Jaf, S.; McGarry, K. A Literature Survey of Recent Advances in Chatbots. *Information* 2022, 13, 41. <https://doi.org/10.3390/info13010041>

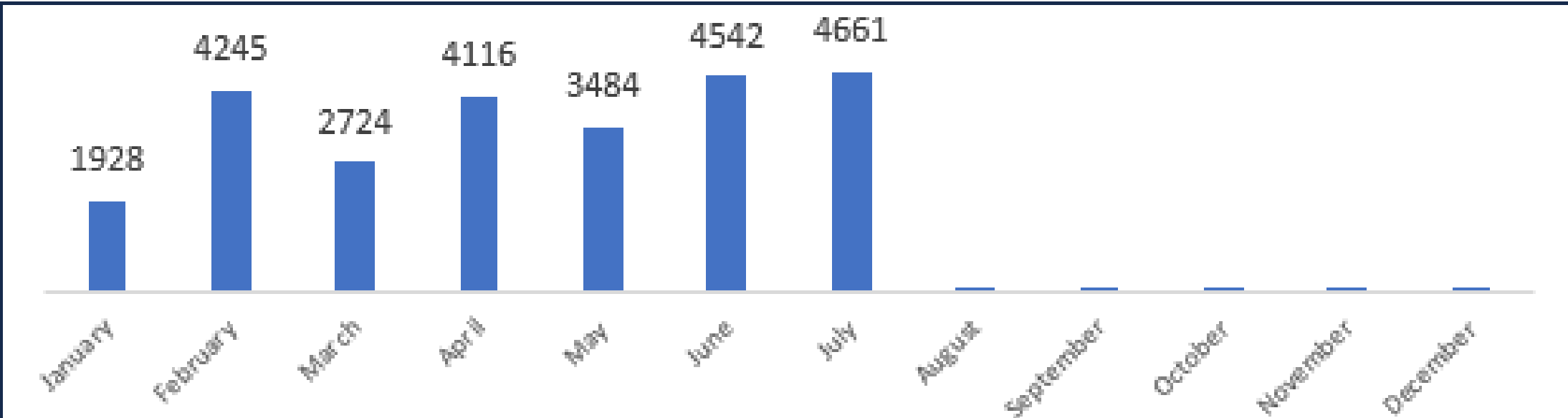
## Meet Anna The SSOE Chatbot



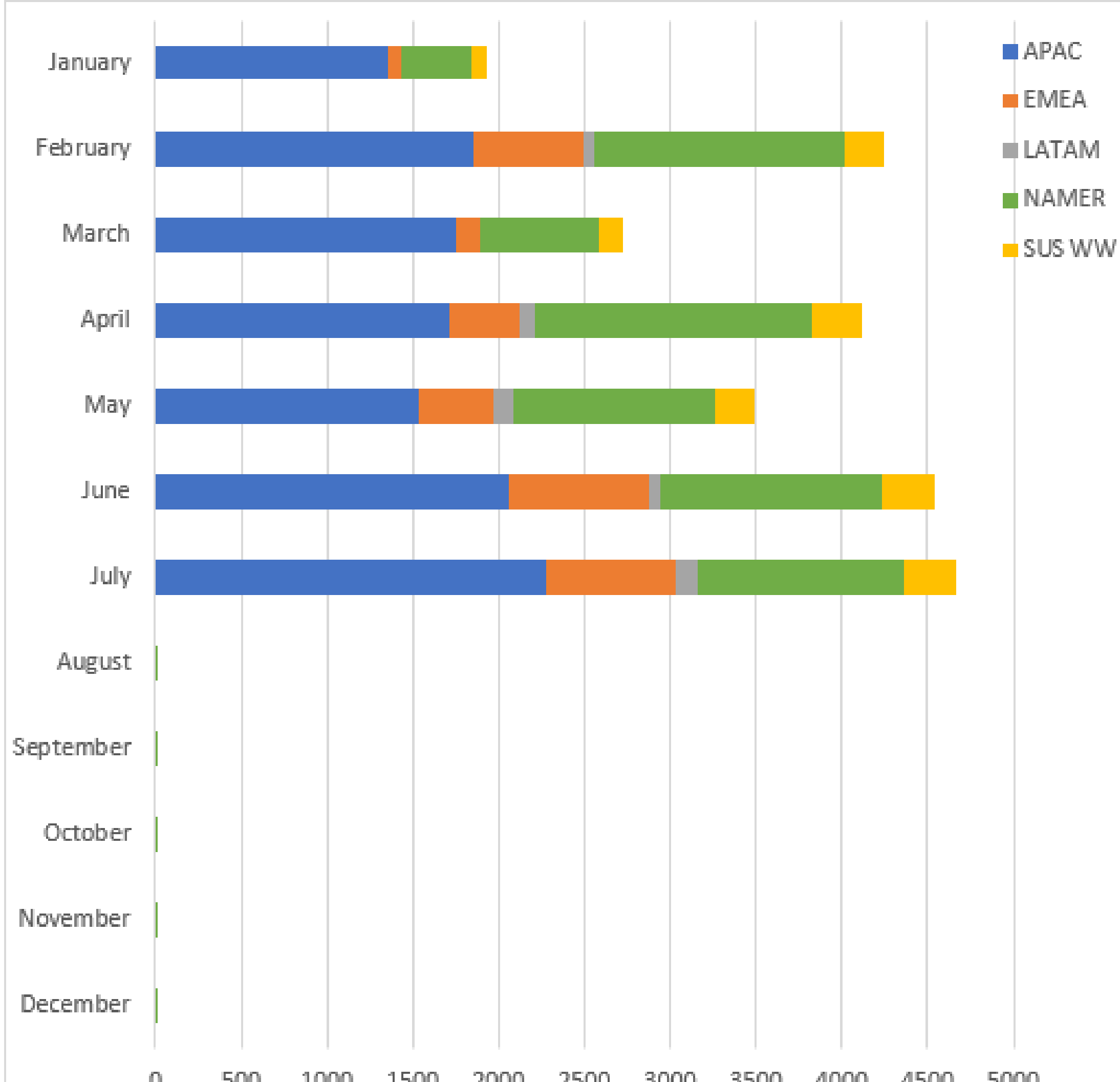
Total Unique Users by Region



Total Anna Interactions



Total Interactions by Region



### Anna's Top Asked Categories

- 1 Billing
- 2 SFDC Accounts and Oppty Management
- 3 Sales Compensation
- 4 Tools
- 5 New Hire and Onboarding

### Anna's Total Knowledge Base

<b>GLOBAL</b>	1176	<b>APJ</b>	856
<b>NAMER</b>	625	<b>LATAM</b>	0
<b>EMEA</b>	295	<b>TOTAL</b>	5877
<b>SUP</b>	2925		
<b>2% INCREASE OVER LAST MONTH</b>			

### Anna's Top Users

1 htos	6 moeki	11 afojoshi
2 taytor	7 samfarbe	12 mkpak
3 keikomo	8 sachitok	13 kylav
4 fachound	9 leithnak	14 hikakawa
5 fyoshif	10 hirosuma	15 yurykino