

AMENDED Exhibit 1161

PLAINTIFFS' OMNIBUS OPPOSITION TO DEFENDANTS' MOTIONS FOR SUMMARY JUDGMENT

Case No.: 4:22-md-03047-YGR

MDL No. 3047

In Re: Social Media Adolescent Addiction/Personal Injury Products Liability Litigation

Software Engineer, ML/CV-Level 4

Tech Promo Process, H1 2021

Promo Nomination Form

Completed by: [REDACTED] (Manager)

1. Demonstrating Sustained Performance at the next Tech level

Describe this team member's most important accomplishments since their last promotion that demonstrates their sustained performance at the next technical level. Analyze a maximum of three projects to evaluate their accomplishments (**Mandatory: in your response include artifacts that support nominees technical accomplishments**).

[REDACTED] is a great machine learning engineer and tech lead with strong technical talents across the stacks of machine learning. [REDACTED] has made a tremendous amount of contribution to the team and the company. Referring to the [leveling guide for machine learning engineers](#), [REDACTED] has been performing at the L5 MLE for many quarters.

Below, I'll focus my assessment on three major projects [REDACTED] has been working on and contributed to since his last promotion: 1. friend stories ranking; 2. friend suggestion ranking; 3. auto moderation

Friend Stories Ranking

Friend story is one of the most engaging features of Snapchat. More than 140 million unique users watch friend stories on a daily basis, totaling more than 16 billions snap views daily. Friend Stories is also a major source of Snapchat's revenue, contributing to more than 75% of Snap Ads Revenue. As a result, the ranking quality of Friend Story is vital to Snapchat and improvement in ranking quality contributes significantly both to user engagement and monetization.

This is [REDACTED] main responsibility, and he has been the TL for the friend stories ranking team with 2 ~ 5 engineers since his last promotion. As the TL, [REDACTED] maintains a [roadmap](#) for the team, runs weekly sync meetings, and mentored / onboarded two new engineers on the team, [REDACTED] and [REDACTED] has worked with everyone on the team, providing guidance and debugging together, on the whole tech stack of the friend stories ranking, including training data pipeline, signal data pipeline, serving and training infrastructure.

Throughout the time, [REDACTED] and team has made tremendous progress, including a big infrastructure migration (codename: STORM) and many many rounds of model iteration.

STORM (STories Ranking Migration) [slides presented to Jerry]

Up till the end of H1 2019, almost all of the friend stories ranking logic ran inside the FSN. The system was full of legacy coding and the ownership of various components were scattered around the company if the team was lucky to find an owner. For example, the features were hosted inside Bigtables managed by the identity team; and models are loaded inside DataStore, which has a limited byte size of 1MB. This legacy system slowed up the development of the whole team, and we started to revamp from end of H1, and spent most of Q3 on this project.

This migration involves migrating the backend, signals, ML inference, training data, and model training. Xinran made significant contributions to each of the areas individually, in addition to coordinating the efforts from other team members. Some of his code changes:

- Migrating friend story ranking serving
 - Migrated ranking signals: ranking signals proto design, UPS integration for signal retrieval,

vision”

- Finally, [REDACTED] has clearly demonstrated his **expert end-to-end understanding of underlying data pipelines, modeling techniques, training and inference infrastructure**, and more importantly the willingness and technical talents to work on wherever needed. As [REDACTED] mentioned in his feedback, “*I was most impressed by [REDACTED] willingness to do the hard and dirty work that needed to be done building feature pipelines and infrastructure*”; and from [REDACTED] feedback, “*With his ML expertise and his experience on the Discover auto moderation, [REDACTED] was able to build the signal pipelines and the serving flow quickly*”.

Friend Suggestion Ranking

Quick Add section is a critical feature for users to build and grow their friend circle. In particular, [REDACTED] sent by new users, and is the primary lever for improving new user retention. In 2020 H1, the friending ranking team reached out through [REDACTED] asking for ML support for the friend suggestion ranking inside the [Quick Add section](#). As a result, [REDACTED] worked together with the team for about 3 months.

After [REDACTED] joined the effort, he quickly ramped up and identified two main pain points in the systems: 1. training workflow; 2. model architecture. With that understanding, [REDACTED] proposed to migrate the friend suggestion ranking to masterchef training with a detailed [design doc](#), and then he worked with the team to deliver his vision. The majority of the work was done by [REDACTED] individually, and here are some of his major code changes:

1. Implemented the adapter dataflow job for training data generation. [\[CL1,CL2\]](#)
2. Implemented training code inside masterchef-training repo. [\[PR\]](#)

After finishing these infrastructure changes, [REDACTED] was able to train a multi head neural network model with an advance model architecture with great gains: **+0.11%** active days in top-line metrics, **+2.82%** new friends made with D1 new users in new user friending, and **+15.06%** Quick Add friend requests. This is one of the largest gains from one single change for friend suggestion ranking. [\[Launch Report\]](#)

[REDACTED] then also helped migrate the training workflow to Barista, a shared training platform across Snapchat, to streamline the training workflow. This migration also greatly simplified the team's migration to the Bento ecosystem as [REDACTED] manager of the friending ranking team, pointed out in his feedback. Beyond building the system, [REDACTED] paid great attention to onboard the friending team onto the new workflow. He gave a presentation to the team [\[slides\]](#), and wrote a detailed [instruction document](#) for the team, which has later been maintained by the friending team and grown to 23 pages.

[Quotes from the leveling guide are **bolded**]

- This project showcased [REDACTED] **capability of completing complex and impactful projects on time and with quality**.
- In this project, [REDACTED] demonstrated his **expert end-to-end understanding of underlying data pipelines, modeling techniques, training and inference infrastructure and business metrics**, and his capability to quickly **identify and architect changes that can significantly improve the quality of the output of the system**.
- Moreover, [REDACTED] demonstrated **positive influence on other engineers** and **operational excellence** by giving presentations and writing detailed onboarding documents to help the friending ranking team to get up to speed in model development.
- Finally, [REDACTED] has demonstrated that he has been **up to date with the state of the art machine learning techniques relevant to your domain**, both internally externally: 1. he introduced the [bilinear layer](#) which was a technique published in 2019 and had success in ads ranking team; 2. he migrated the training workflow to barista, which was a training platform under development internally

2. Living our Values

- a) Given the three accomplishments you described above, how did this team member demonstrate [Snap's Values In Action](#)?

Two of [REDACTED] strongest suites are Action Oriented and Instills Trust.