Deep  
learning  
recently  
driven  
tremendous  
progress  
wide  
array  
applications  
,  
ranging  
realistic  
image  
generation  
impressive  
retrieval  
systems  
language  
models  
hold  
human-like  
conversations  
.  
While  
progress  
exciting  
,  
widespread  
use  
of  
deep  
neural  
network  
models  
requires  
caution  
:  
guided  
Google  
’  
AI  
Principles  
,  
seek  
to  
develop  
AI  
technologies  
responsibly  
by  
understanding  
and  
mitigating  
potential  
risks  
,  
as  
the  
propagation  
and  
amplification  
of  
unfair  
biases  
and  
protecting  
user  
privacy.Fully  
erasing  
the  
influence  
of  
the  
data  
requested  
to  
deleted  
is  
challenging  
since  
,  
aside  
from  
simply  
deleting  
from  
databases  
it  
’  
s  
stored  
,  
it  
also  
requires  
erasing  
the  
influence  
of  
that  
data  
artifacts  
such  
as  
trained  
machine  
learning  
models  
.  
Moreover  
,  
recent  
research  
[  
1  
,  
2  
]  
has  
shown  
that  
in  
cases  
it  
may  
be  
possible  
to  
infer  
high  
accuracy  
whether  
example  
used  
to  
train  
a  
machine  
learning  
model  
using  
membership  
inference  
attacks  
(  
MIAs  
)  
.  
This  
can  
raise  
privacy  
concerns  
,  
as  
it  
implies  
that  
even  
an  
individual  
's  
data  
is  
deleted  
from  
a  
database  
,  
it  
may  
still  
be  
possible  
to  
infer  
whether  
that  
individual  
's  
data  
was  
used  
to  
train  
a  
model  
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