

Mental Health in Tech

- DATA INCUBATOR CHALLENGE

Current Statistics

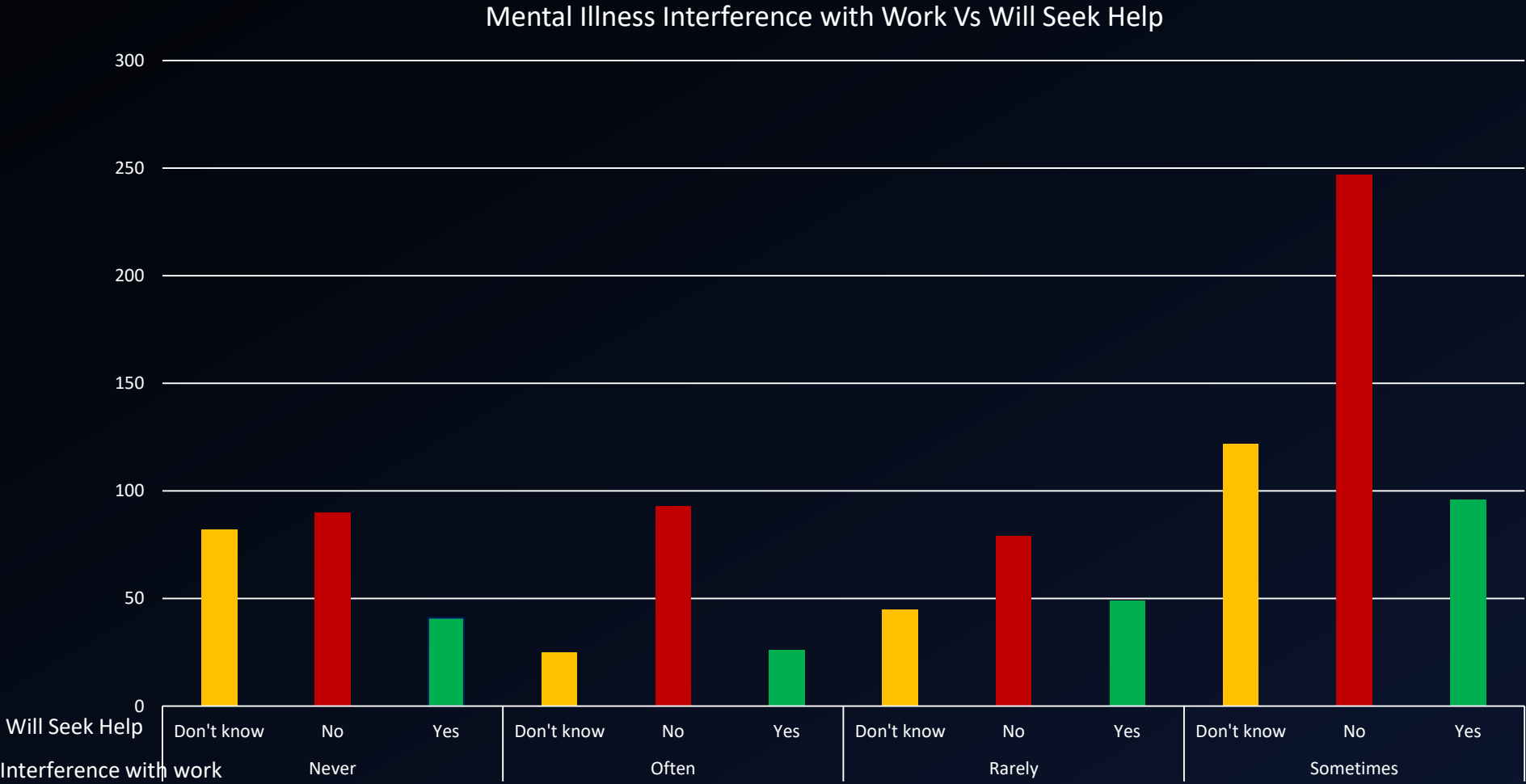
- 16 million people suffer from mental illness in the U.S.
- Technology sectors are no different
 - Irregular work hours
 - Unrealistic goals
 - Neglect
 - Social stigma

Dataset Snapshot

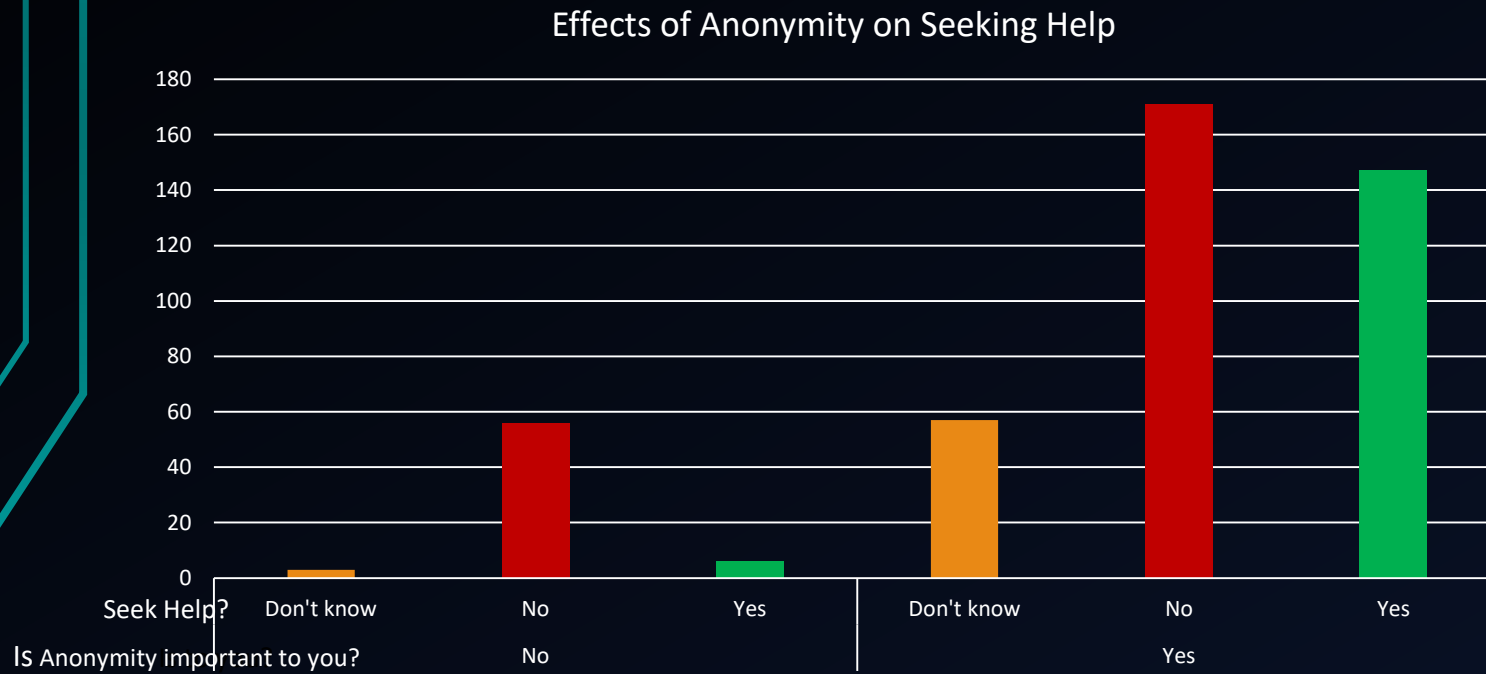
Age	Gender	Country	state	self_employed	family_history	treatment	work_interfere		no_employees	remote_work	tech_company	benefits	care_options	wellness_program	seek_help
37	Female	United States	IL	NA	No	Yes	Often		25-Jun	No	Yes	Yes	Not sure	No	Yes
44	M	United States	IN	NA	No	No	Rarely		More than 1000	No	No	Don't know	No	Don't know	Don't know
32	Male	Canada	NA	NA	No	No	Rarely		25-Jun	No	Yes	No	No	No	No
31	Male	United Kingdom	NA	NA	Yes	Yes	Often		26-100	No	Yes	No	Yes	No	No
31	Male	United States	TX	NA	No	No	Never		100-500	Yes	Yes	Yes	No	Don't know	Don't know
33	Male	United States	TN	NA	Yes	No	Sometimes		25-Jun	No	Yes	Yes	Not sure	No	Don't know
35	Female	United States	MI	NA	Yes	Yes	Sometimes		5-Jan	Yes	Yes	No	No	No	No
39	M	Canada	NA	NA	No	No	Never		5-Jan	Yes	Yes	No	Yes	No	No
42	Female	United States	IL	NA	Yes	Yes	Sometimes		100-500	No	Yes	Yes	Yes	No	No
23	Male	Canada	NA	NA	No	No	Never		26-100	No	Yes	Don't know	No	Don't know	Don't know
31	Male	United States	OH	NA	No	Yes	Sometimes		25-Jun	Yes	Yes	Don't know	No	No	No
29	male	Bulgaria	NA	NA	No	No	Never		100-500	Yes	Yes	Don't know	Not sure	No	No
42	female	United States	CA	NA	Yes	Yes	Sometimes		26-100	No	No	Yes	Yes	No	No
36	Male	United States	CT	NA	Yes	No	Never		500-1000	No	Yes	Don't know	Not sure	No	Don't know
27	Male	Canada	NA	NA	No	No	Never		25-Jun	No	Yes	Don't know	Not sure	Don't know	Don't know
29	female	United States	IL	NA	Yes	Yes	Rarely		26-100	No	Yes	Yes	Not sure	No	No
23	Male	United Kingdom	NA	NA	No	Yes	Sometimes		26-100	Yes	Yes	Don't know	No	Don't know	Don't know
32	Male	United States	TN	NA	No	Yes	Sometimes		25-Jun	No	Yes	Yes	Yes	No	Don't know
46	male	United States	MD	Yes	Yes	No	Sometimes		5-Jan	Yes	Yes	Yes	Not sure	Yes	Don't know
36	Male	France	NA	Yes	Yes	No	NA		25-Jun	Yes	Yes	No	No	Yes	No
29	Male	United States	NY	No	Yes	Yes	Sometimes		100-500	No	Yes	Yes	Yes	No	No
31	male	United States	NC	Yes	No	No	Never		5-Jan	Yes	Yes	No	No	No	No
46	Male	United States	MA	No	No	Yes	Often		26-100	Yes	Yes	Yes	Yes	No	No
41	Male	United States	IA	No	No	Yes	Never		More than 1000	No	No	Don't know	No	No	Don't know
33	male	United States	CA	No	Yes	Yes	Rarely		26-100	No	Yes	Yes	Not sure	Don't know	Yes
35	male	United States	TN	No	Yes	Yes	Sometimes		More than 1000	No	No	Yes	Yes	No	Don't know

Source: Kaggle and OSMI Mental Health in Tech Survey 2016

Attitude towards Mental Illness and Seeking Help in the Tech Industry



Neglect and Insufficient Outreach



anonymity	seek_help	Count of anonymity
No	Don't know	3
No	No	56
No	Yes	6
Yes	Don't know	57
Yes	No	171
Yes	Yes	147

Data Analysis

- Features:
 - Density and distribution of mental illness
 - Categorization of causes
 - Affinity to seek help
 - Company's wellness care, etc.
- SVM / Random Forest/ Naïve Bayes to predict/quantify Mental Health Status of employee/s
- Generalize model upon cross validation

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graph TD; A[Feature Extraction] --> B[Behavioral Analysis through Ensemble of ML Models]; B --> C[Predict Mental Health of Employees/ assess work atmosphere];
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Feature Extraction

Behavioral Analysis
through Ensemble of
ML Models

Predict Mental Health
of Employees/ assess
work atmosphere

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