

# CASE STUDY

## COMPANY

### PREDICTVIEW

**P**redictView uses Artificial Intelligence to track and identify indicators of depression, substance abuse and other concerning sentiments in a timely manner. The PredictView architecture is scalable to give consideration to millions of people and flag indicators in seconds.

Their mission is to Improve the mental wellness of students, military veterans and address corporate responsibility to employees by intelligently flagging indicators of depression and substance abuse within social media and digital communications platforms so that prompt appropriate treatment can be provided

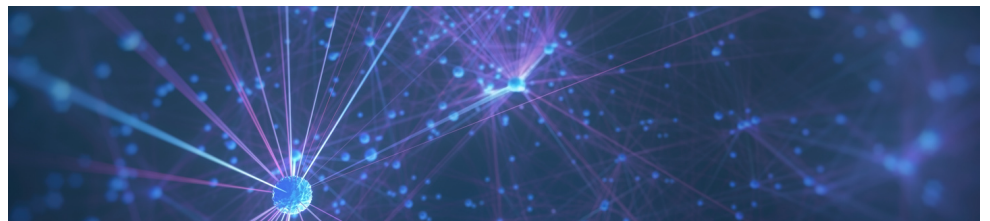
predictview

## WHY?

### PROBLEM TO BE SOLVED

Compounded by the global COVID-19 pandemic, depression and substance abuse, which often accompany each other, were becoming even bigger problems. A few notable points:

- 20 combat veterans take their own lives every day.
- After motor vehicle accidents, suicide is a leading cause of death among the college student population.
- A 2018 Pew Research Centre study found 70% of teens (13-17yrs) consider anxiety and depression a “major problem” among their peers.
- According to researchers at Drexel and Kean universities, ~25% of collegiate athletes have reported clinically relevant levels of depressive symptoms.
- A 2016 Psychology Today report found 6.3% of collegiate student-athletes met the criteria for clinically significant depression.
- A Kaiser Family Foundation survey recently found the number of adults that reported having symptoms of anxiety or depression has tripled since the pandemic began.
- 50% of millennials have left a job for mental-health reasons.



## HOW?

### INNOVATIVE SOLUTION

The PredictView solution is architected on a scalable data pipeline cloud architecture that can simultaneously ingest a diverse range of social media and digital communication feeds, including but not limited to:

Fakebook, Snapchat, Instagram, Twitter, TikTok, LinkedIn

In conjunction with the team at Nimbus, deep learning neural network-based machine learning models have been developed and trained to understand significant text lexicons and associated images to identify the targeted behaviours i.e. depression, substance abuse, etc. The developed solution has capacity to perform time-series analysis to identify trends of sentiment, behaviour and volume of communications to note significant deviations from historical patterns. This can represent behavioural indicators, called signals, which are flagged on the web UI (mobile applications will be developed) so that a school, company or veteran administrators can analyse and decide what, if any, actions are to be taken according to their own protocols and processes. The decisions made by the system users are then fed back to the machine learning models to further train, tune and refine them. The ongoing training improves the accuracy of the solution over time, specific to the customer's desired expectations of the system. For third-party integrated solutions, APIs are available to interface with distributor and partner systems.

## IMPACT FOR THE COMPANY

PredictView Technologies will sell its product to the university market, the veterans services market, and then to the commercial enterprise market. The services will be sold as month-to month, annual, or multi-annual subscriptions through distributors. The vision for the product is, ultimately, an engine for other solutions selling directly to customers. Developed to run on public cloud environments, the operations of the company are kept small as traffic and computation scales, making this a very profitable SaaS company.



Nimbus Research Centre,  
Munster Technological  
University Bishopstown,  
Cork, Ireland

### Researchers

**Dr. Conor Lynch**  
conor.lynch@mtu.ie

**Rose Bain**  
rose.bain@mtu.ie

**Christian O'Leary**  
christian.oleary@mtu.ie

## WHAT OUR CLIENT HAS TO SAY

# CLIENT TESTIMONIAL

Randy Waters, CEO PredictView

"Nimbus Research Centre joined our artificial intelligence project to scan social media posts of college students to look for indicators of concerning behaviour. The Nimbus team brought several valuable contributions to the project. The data science research team at Nimbus was a delight to work with, they were very collaborative while constantly challenging prevailing thinking. We plan to continue working with the Nimbus Research Centre for the evolution of this important AI project."