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neurotie

3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

TEAM 3

NYUAD HACKATHON for Social Good in the Arab World

















970 million people suffering from mental health disorders















EEG ELECTROENCEPHALOGRAM

A non-invasive method used to record electrical activity of the brain by placing small electrodes on the scalp used clinical tests

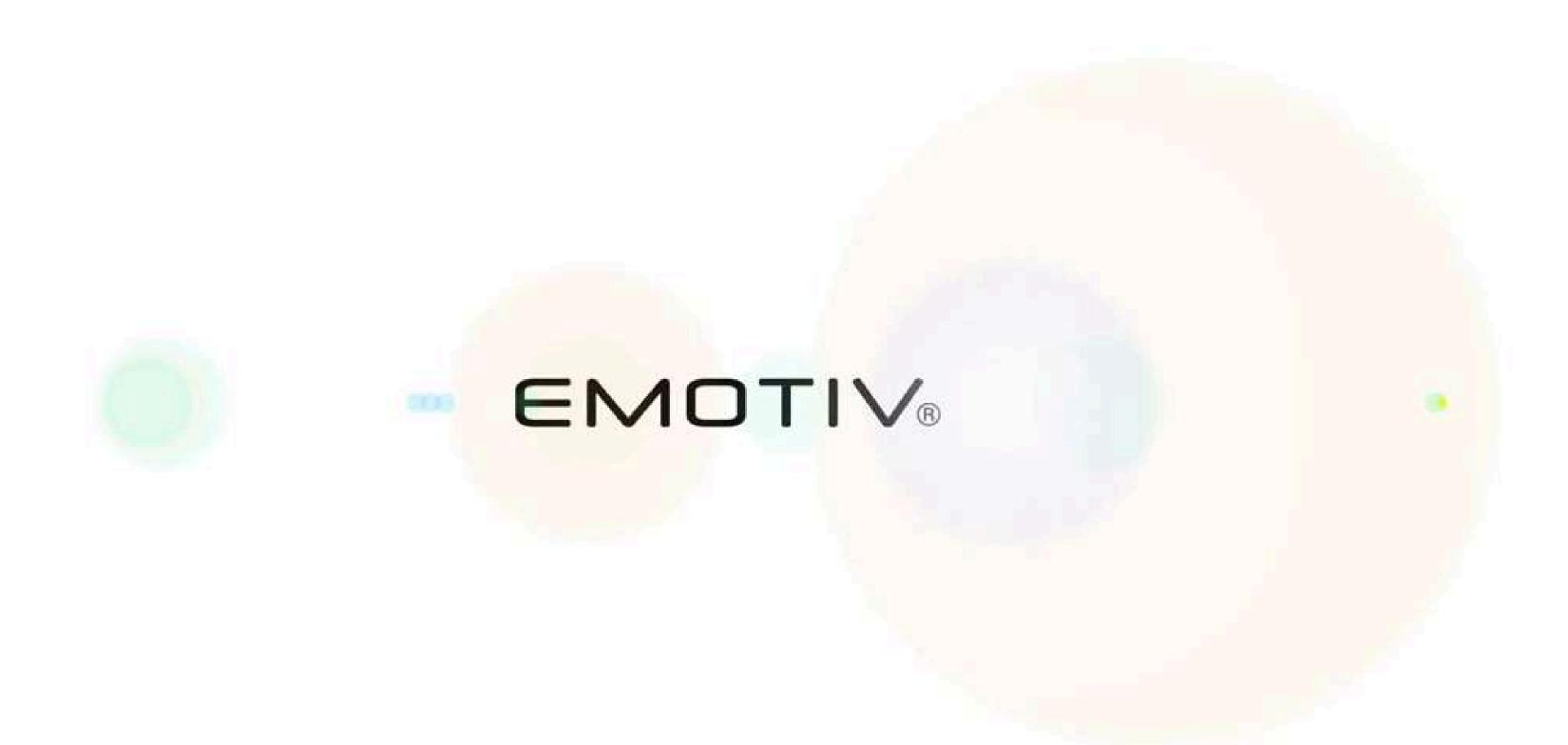






Name: Valentine

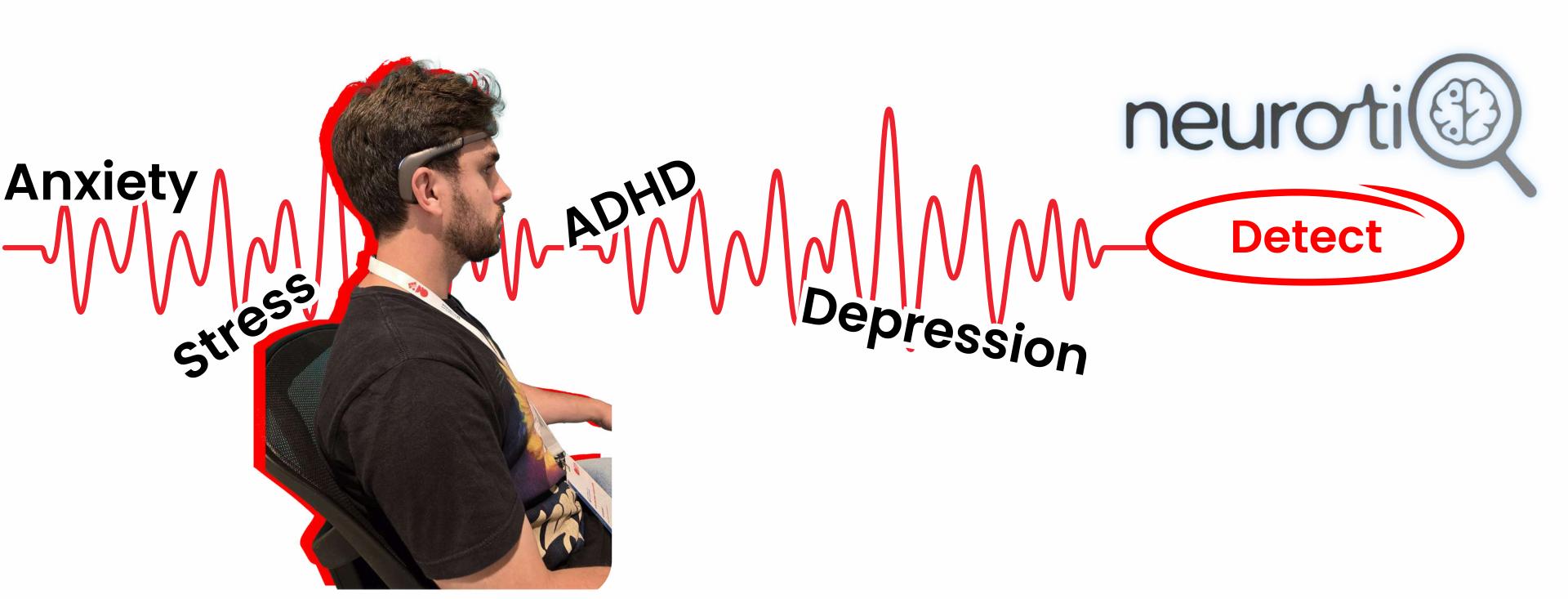
Age: 22 Nationality: American - Scared to go to the Clinic







What We Do?











How NeurotiQ Works



Problem

EEG Signal Analysis Suffer from mental health disorders

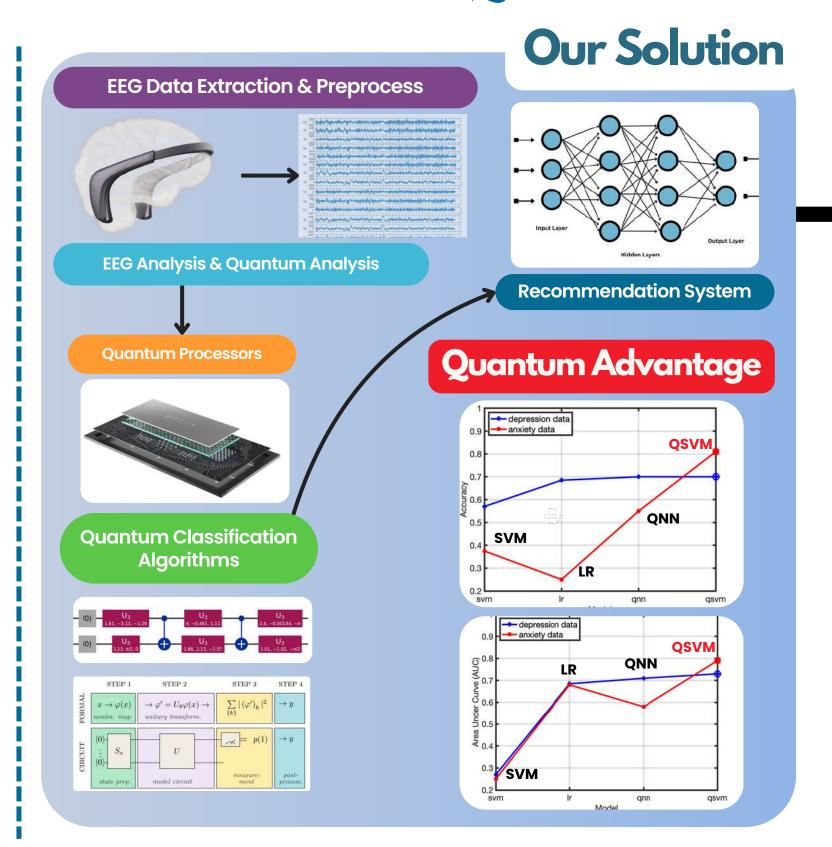
SDGs Tackled

3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

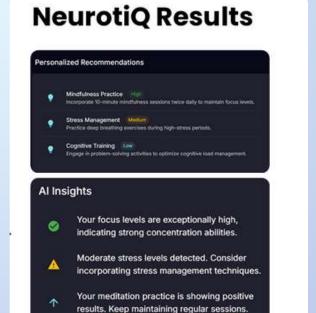
Impact

- 1. Making mental health screening accessible for millions
- 2. Decrease Stress Rate Locally & Globally
- 3. Increase General Self-Awareness



Induron (Control of the State of State

- 1. Analyse Data
- 2. Tips to feel Better
 3. Connect to your Doctor

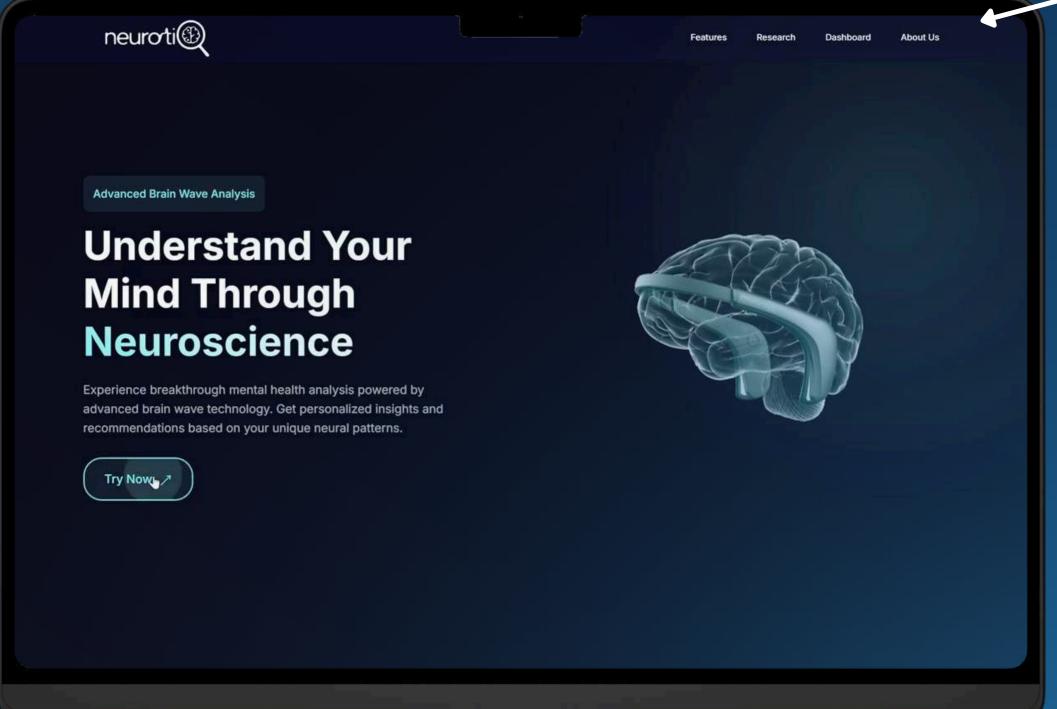






Our Solution

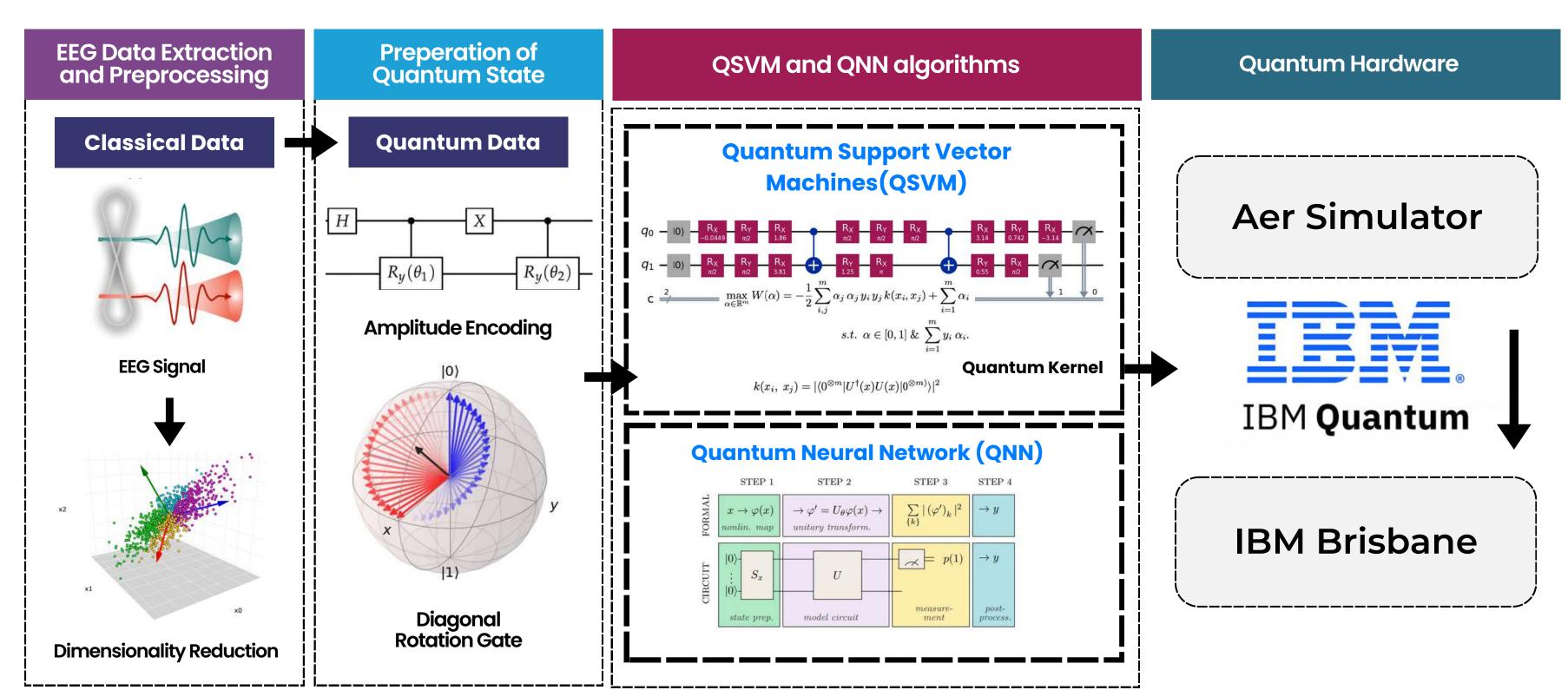








QML Experimental Methodology

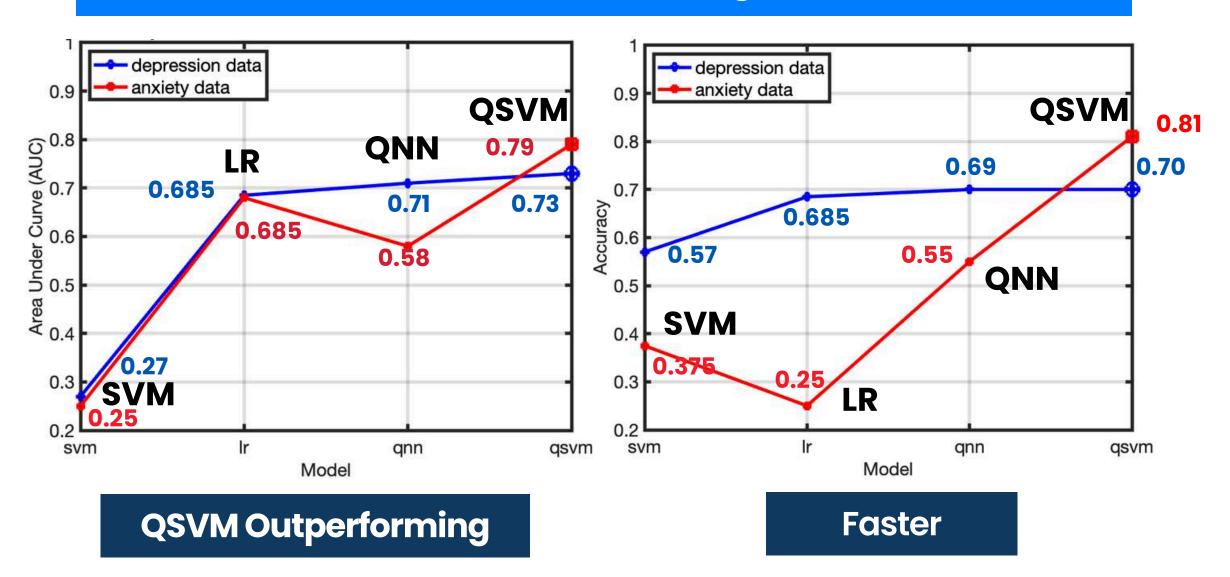




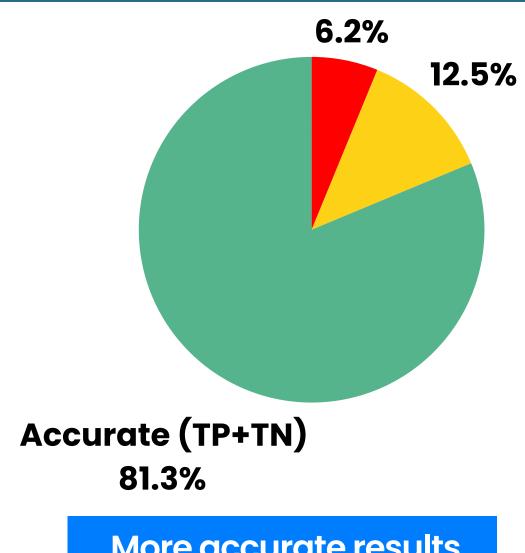


QML Advantage)& Performance

AUC and Accuracy Performance Metrics For Classical and Quantum Algorithms



False Positive < 15%



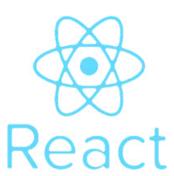
More accurate results





Hack Ingreditents

Front-End



Vercel



Back-End





Quantum Solutions



QqBraid

IBM Quantum

Quantum Machine Leanring (QML)

Quantum Vector Support Machine (QSVM)





Business Model

B₂C

Base

- Headset Rental
- Basic Brain Scans
- Analytical Reports
- Affordable entry point

for individuals

B₂C

Premium

- Clinician Reviews
- Expanded Condition Modules
- Personalized recommendations

for individuals

B₂B

Hospitals & Specialty Clinics

- Partnerships
- Dedicated NeurotiQ Portal



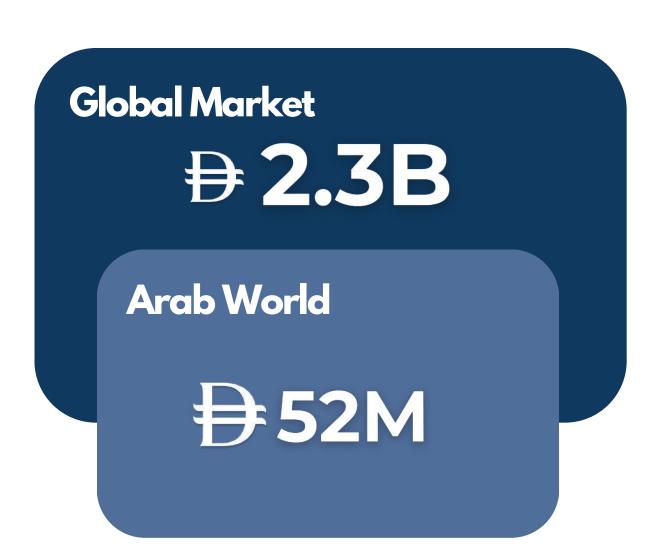






Market & Opportunity

Market Potential



We plan to achieve **\$1.65M in ARR** within the next 2 years Around **30k Users**

Comparative Analysis

	neuro ti	1 Myndlift	NEWMENTALITY BIOFEEDBASK - NEUTOFEEDBASK - COURSELING	••••••••••••••••••••••••••••••••••••••
Rental Model			×	×
Quantum ML Engine		×	×	×
Real-Time Insights		×	×	
Low Access Barrier		×		
Hardware Provider		×	×	×





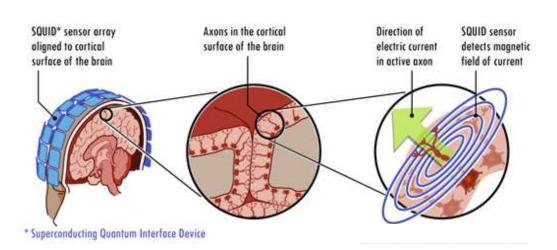
Our Future Plan

6 Months (Short-Term Goals)

- Prototype Quantum Algorithms for EEG
- Implement Basic Quantum Data Security
- Clinician Co-Design Phase

3 Years (Long-Term Goals)

 Fully Quantum-Native Platform with MEG Integration (quantum data)

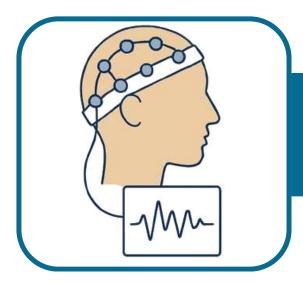


- Clinical Trials and Global Deployment
- Advanced Quantum Cryptography Infrastructure





Our Impact



Highly accurate mental health insights from EEG Analysis

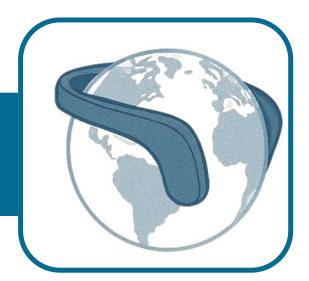






Portable, Real-time, Easy to Use

Making mental health screening accessible for millions





"We're NeurotiQ, we help you take charge of your mental health, with reliable support and effortless convenience."







Scan To View NeurotiQ!

Sponsors:



























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Problem

EEG Signal Analysis suffers from slow diagnosis for mental health disorders

SDGs Tackled





Frontend





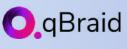
Backend



©OpenAl

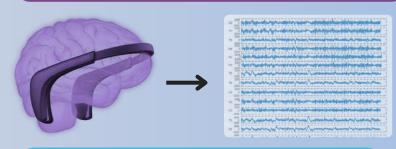
Quantum







EEG Data Extraction & Preprocessing

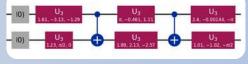


EEG Analysis & Quantum Analysis

Quantum Processors

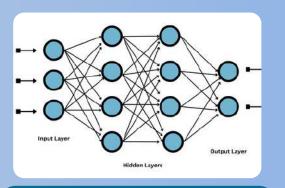


Quantum Classification Algorithms



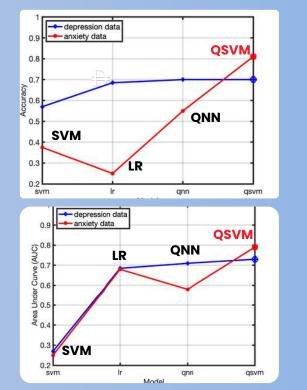
	STEP 1	STEP 2	STEP 3	STEP 4
FORMAL	$x \to \varphi(x)$ nonlin. map	$\rightarrow \varphi' = U_{\theta}\varphi(x) \rightarrow$ unitary transform.	$\sum_{\{k\}} \left(\varphi'\right)_k ^2$	$\rightarrow y$
CIRCUIT	$ 0\rangle$ \vdots $ 0\rangle$ S_x	U	p(1)	$\rightarrow y$
5	state prep.	model circuit	measure- ment	post-

Our Solution



Recommendation System

Quantum Advantage



UI Dashboard Integrated With AI



- 1. Analyse Data
- 2. Tips to feel Better
- 3. Connect to your Doctor

Market Potential

Global Market

∌ 2.3B

Arab World







Appendix

QML Experimental Methodology

