Quantifying the Black Experience in the Age of Humanics

A Robot-Proof Model for the Digital Era

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How Robot-Proof Are You?

"By 2025, our planet will count 8 billion human inhabitants, all of them with human ambition, intelligence, and potential. Our planet will be more connected and more competitive than the one we know today."

-Joseph Aoun

President Northeastern University

Author of Robot-Proof

Abstract

The goal of Quantifying the Black Experience study is to develop measures, models, and predictions that offer actionable information for measuring cultural agility. The research is driven by the hypothesis that the lack of cultural agility on an individual and institutional level, can have negative unintended health effects for black students on college campuses. By leveraging technological advancement in emotion Artificial intelligence (A.i.) we can design predictive analytic models and algorithms to measure cultural agility. In doing so we visualize cultural bias not as an individual phenomenon, but as a collective struggle to increase our cultural awareness. The aim of the study is to understand patterns of human behavior by integrating data collected from remote sensors, physiological and mood-aware technologies to assess the feasibility of detecting time dependent signals to the human chronobiome. This Robot-Proof model will not only analyze data but offer personalized recommendations on how our environment impacts our lives. The innovative solution to increasing cultural competency is to provide personalized immersive experiences for students to confront cultural bias in Augmented/Virtual Mixed Reality.

Introduction

There is a paradigm shift on the horizon as our society is on the verge of a historic tipping point. Our emergence in this digital revolution has been marked by exponential progress in technological advancements that have notably increased our capacity to engage with one another. The power of the internet, social media and a digital gig economy have resulted in a global community that is more connected than at any other time in human history. However, as society enters into this Age of Humanics, where brilliant machines work alongside humans, our digital world must are undergo a transition where we get comfortable with being uncomfortable.

The Problem

In order to truly evolve we must understand that as our capacity to interact with one another increases, we also increase the capacity for misunderstandings. In a time when it is expected that robots will put up to 800 million people out of a job by 2030, certain segments of our citizenry have yet to adapt to the seismic shifts in our evolving culture. The problem is that we live in the digital age, and students face a digital future in which robots, software, and machines powered by artificial intelligence perform an increasing share of the work humans do now.

It appears as if nationalist thinking and the fear of a global economy have stifled our ability to leverage the full potential of these emerging technologies. Understanding that the diversity of the human experience is not simply about seeing "culture," but rather evolving our minds to a new global consciousness by experiencing just how interconnected we truly are.

Sophisticated digital tools and advanced machinery are already transforming our everyday lives using algorithms and machine learning to autonomously process data. These brilliant machines are capable of

making ground breaking recommendations by discovering insights about the our individual human experience. Machine Learning technologies essentially replace the need for human effort in processes that involve aggregating data from multiple systems. Evidence of these inflection points are all around us, as machines become more connected in their use of sensors (i.e. internet of Things (iOT).

More so, access to Big Data is revolutionizing our economy by relying on algorithms to mine bottomless troves of data and then apply the information to new functions and aspects of our lives. In order to prepare future generations to compete in a labor market in which brilliant machines work alongside humans, we must develop a model to that can intricately measure the fabric of our personal and professional lives.

The potential to surpass human intelligence appears to be rooted in algorithms designed by humans. Yet, human bias is one thing that uniquely defines our existence. If the people who are developing this technology lack cultural agility, it is very likely that there will be unconscious cultural bias in the algorithm.

The Solution

Institutions of higher learning are committed to creating safe inclusive spaces for students to develop growth mindsets. Colleges and universities, being a microcosm of the world, offer the perfect atmosphere to quantify the effects of cultural bias on marginalized members of society.

The first step involves quantifying the collegiate black student experience. We then need to shift from running uncoordinated individual efforts within silos to launching an integrated program organized around the black student journey within the College Ecosystem. Next is a shift from using individual technologies and approaches in a disconnected manner to connecting and applying them to the black student journey.

One of the primary objectives of this study is to partner with Northeastern S.A.i.L. to develop and conduct an NU Black Quantified Self Model. The hope is to use this data to launch a 1-year pilot to test our machine learning A.i. algorithm.

What is Cultural Agility?

"Cultural agility involves more than just knowing how to behave in a video conference or at a foreign restaurant. Cultural Agility requires a deep enough immersion in a culture so that we can fit seamlessly into multicultural teams or get results from people who have dramatically different lives from our own.

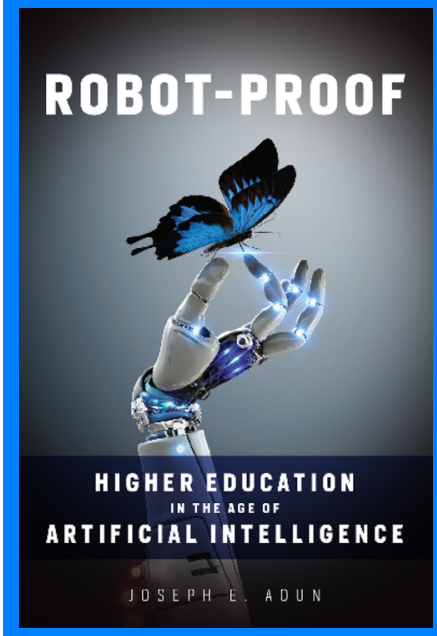
In our culturally diverse economy, the most successful professionals will be those who can step lightly across divides, by showing psychological ease in making decisions in different contexts, integrating or adapting, and succeeding at different roles."

"To acquire the cognitive capacities at a high level, students must do more than read about them... to cement them in their minds, they need to experience them in the intensity and chaos of real work environments. It is how college students learn to think differently. This makes it *the ideal delivery system for Humanics."*

-Joseph Aoun

President Northeastern University

Author of Robot-Proof

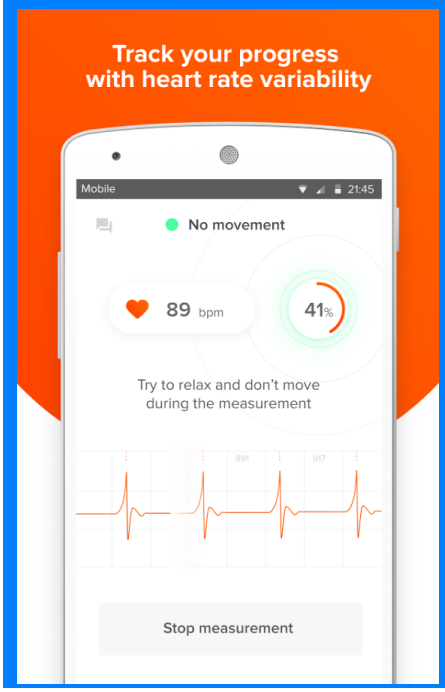


"Together, the new literacies and the cognitive capacities integrate to help students rise above the computing power of brilliant machines by engendering creativity. By doing so they enable them to collaborate with other people and machines while accentuating the strengths of both. Humanics can, in short, be a powerful tool-set for humanity.""

-Joseph Aoun

President Northeastern University

Author of Robot-Proof



In the Age of Humanics, lifelong learners will require universities to evolve in meeting the personalized needs of students. This study is designed to develop the right configuration of tools that allow for an understanding of how our multifarious environment impact our lives.

Big Data

"The only constant in life is change." This statement is a universal truth for all of humanity- change, negative or positive, is going to happen. As we move into the Age of Humanics the data we collect will allow us to extract some sense from the world as we are experiencing it. Advanced analytics is the autonomous processing of data using sophisticated tools to discover insights and make recommendations. It provides intelligence to improve decision making and can especially enhance journeys where nonlinear thinking is required. Our brilliant machines allow for us to use mobile applications and gadgets to track and analyze our daily lives. The increase in compact technology along with the right collection of data can offer personalized recommendations for how to increase your cultural agility.

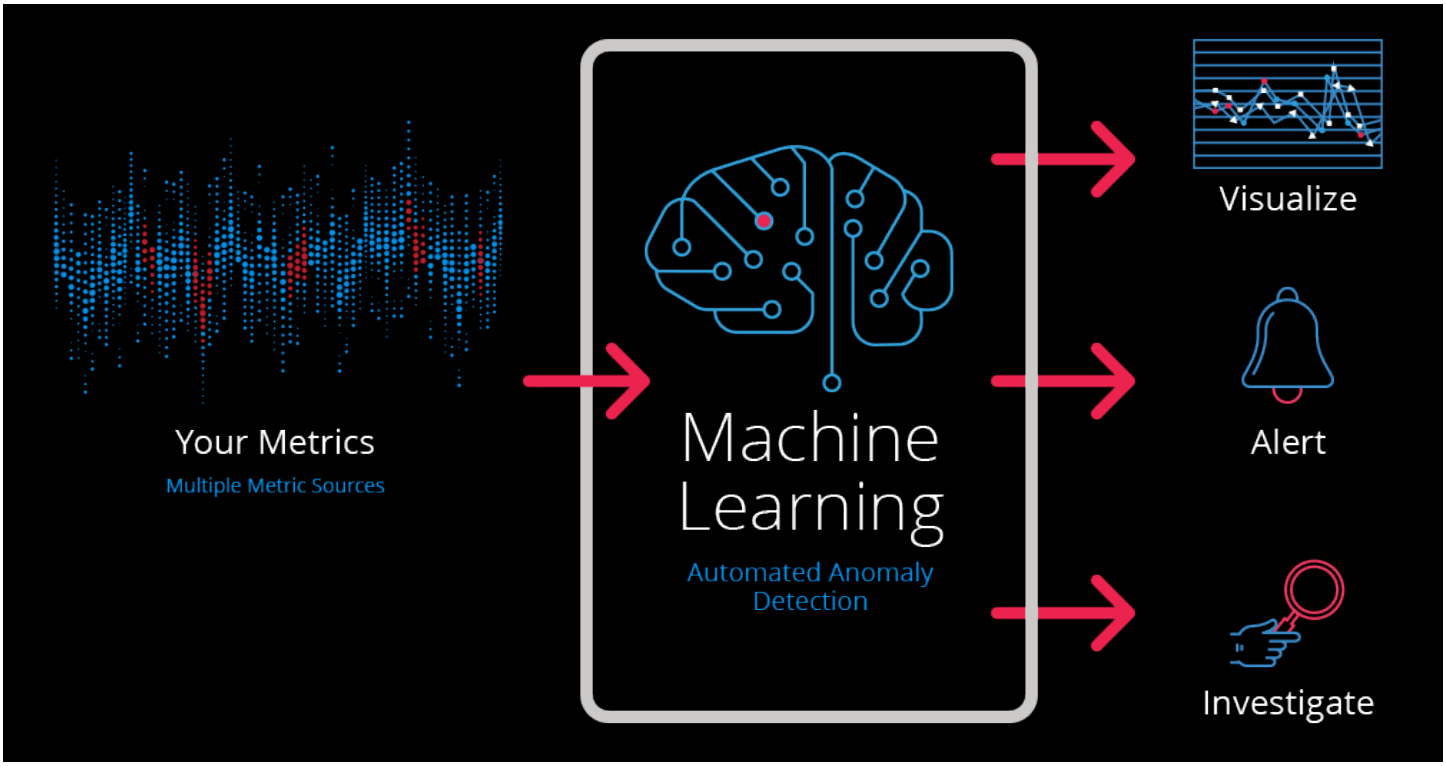
Quantified Self Model

The Quantified Self is a movement that promotes self-tracking and using personal data to improve health and well-being. Using technology to "life-log" is a great way to learn how to become a healthier, happier and more productive person.

Your mood, diet, spending, blood pressure, productivity- the list of things you can measure about yourself are endless. Tracking data about ourselves can give us an objective insight into our daily lives, giving us the tools we need to achieve our self improvement goals. These digital biomarkers are consumer-generated physiological and behavioral measures collected through connected digital tools such as Welltory. Welltory allows users to use their iPhone X camera to measure and mange stress and energy. This study wishes to use digital biomarkers to translate new data sources into informative actionable insights as it relates to cultural awareness and agility.

Cognitive Computing

The impact of personalization is reshaping our Digital Era. Hyper-personalization in the Age of Humanics joins together machine learning with big data collected from personalized biomarkers to enable cognitive computing. This study wishes to use cognitive assistants to provide personalized recommendations on cultural agility in real time. We believe embarrassing incidents can be avoided if machine learning algorithms are given more culturally balanced training data. The use of A.i. and big data promises to personalize every aspect of the student journey in the college ecosystem.



Quantified Self is self knowledge through numbers.

Ex: bitesnap

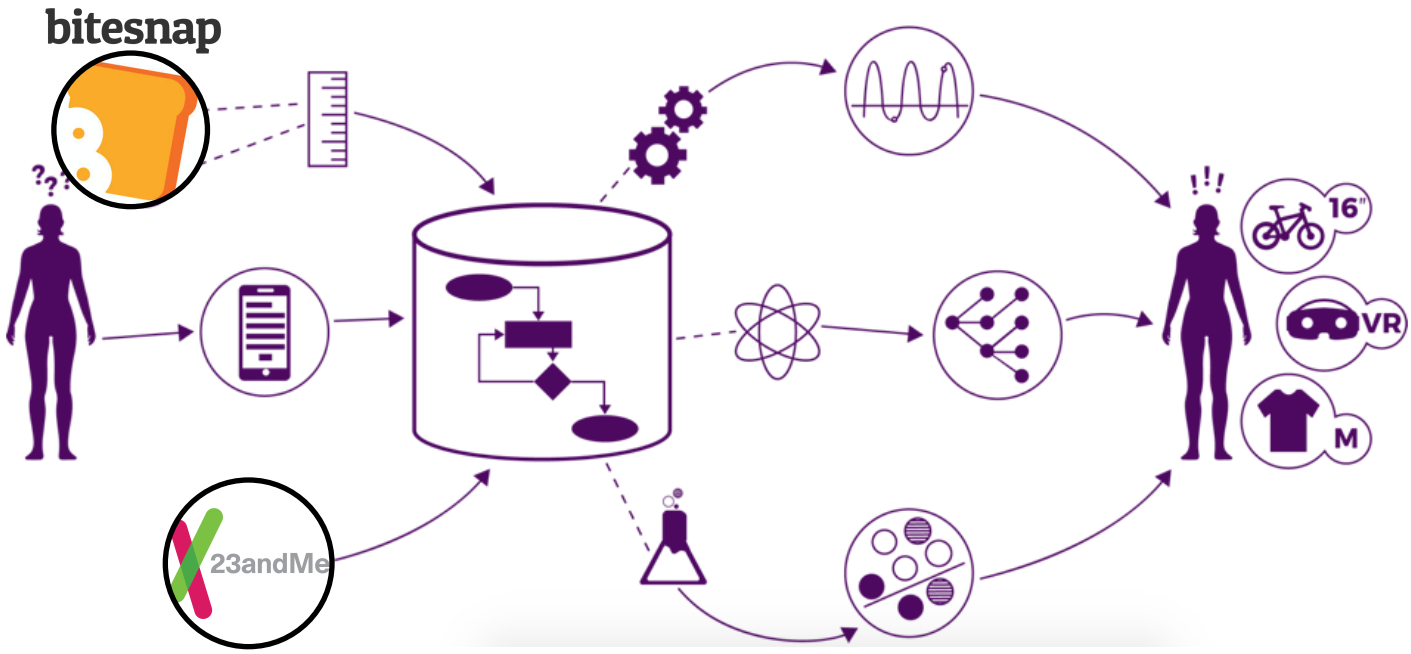
bitesnap is a smart photo food journal app that count calories and nutrients just by taking a picture. Bitesnap recognizes the foods in your meals, saving you time and making it simple to build healthy eating habits.

Quantified Self

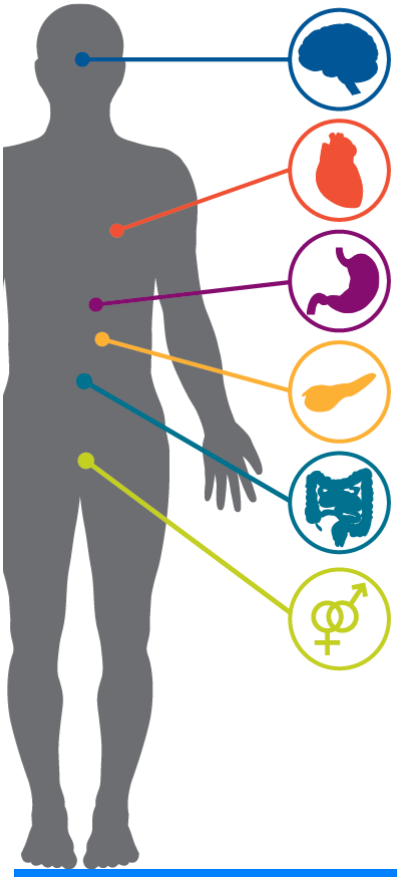
Quantified Self is using DNA analytics to sequence your genome.

Ex: 23andMe

23andMe data can be used to create tailed reports on health, traits and ancestry. Understand what your DNA can say about your body from a wellness and dietary perspective by analyzing your genetic data.



Effects of Stress on the Body



Brain and Nerves: Headaches, feelings of despair, lack of er sadness, nervousness, anger, irritability, trouble concentrati problems, difficulty sleeping, mental health disorders (anxie attacks, depression, etc.)

Heart: Faster heartbeat or palpitations, rise in blood pressure, increased risk of high cholesterol and heart attack

Stomach: Nausea, stomach ache, heartburn, weight gain, increased or decreased appetite

Pancreas: Increased risk of diabetes

Intestines: Diarrhea, constipation and other digestive problems

Reproductive Organs: For women- irregular or painful periods, reduced sexual desire. For men-impotence, low sperm production, reduced sexual desire

Other: Acne and other skin problems, muscle aches and tension, increased risk for low bone density and weakened immune system (making it harder to fight off or recover from illnesses)

Unintended Health Effects

The importance of diversity within higher education cannot be understated. Greater student diversity and more equitable access increases opportunities for histrionically underrepresented learners. College and universities must adapt to the rapidly evolving needs of globally minded students. Individual or institutional bias can trigger trauma, causing physical and mental distress. Current technology allows for students to use their phone to measure heart rate variability during traumatic situations. In doing so, we can track the effects of low-grade micotraumas as they occur- adding data to the context of a student's reality. By quantify the effects of seemingly benign microagressive acts, we believe we can improve campus life for all students.

We all have bias, what will you do about yours? Quantifying culture to recognize bias means we can take the implicit bias out of student life. The aim of this study is to leveraging technological advancements to help students understand why they do what they do.

1) Predict Activity

Our study uses proprietary artificial intelligence to analyze cognitive, motivational, behavioral and performance data to predict cultural agility efficacy and outcomes.

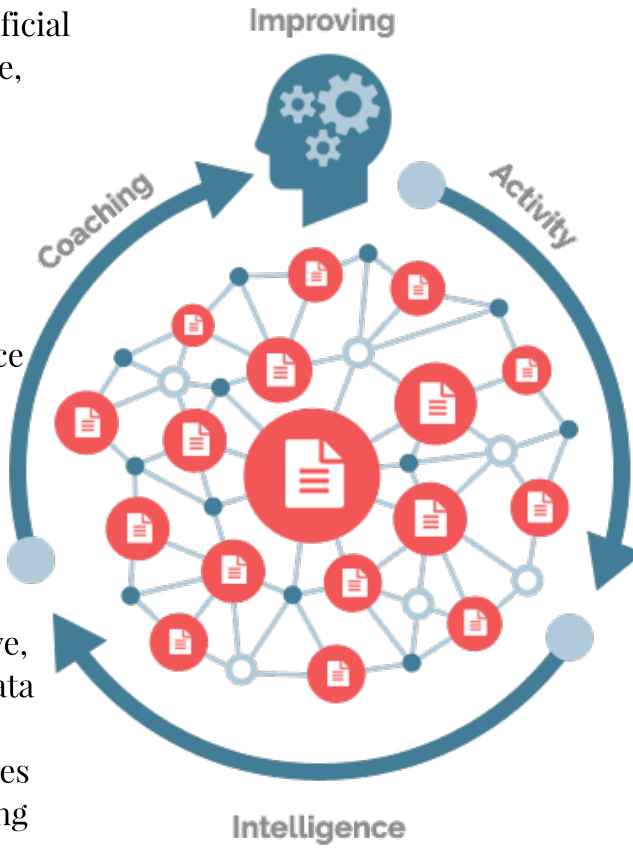
2) Personalize Intelligence

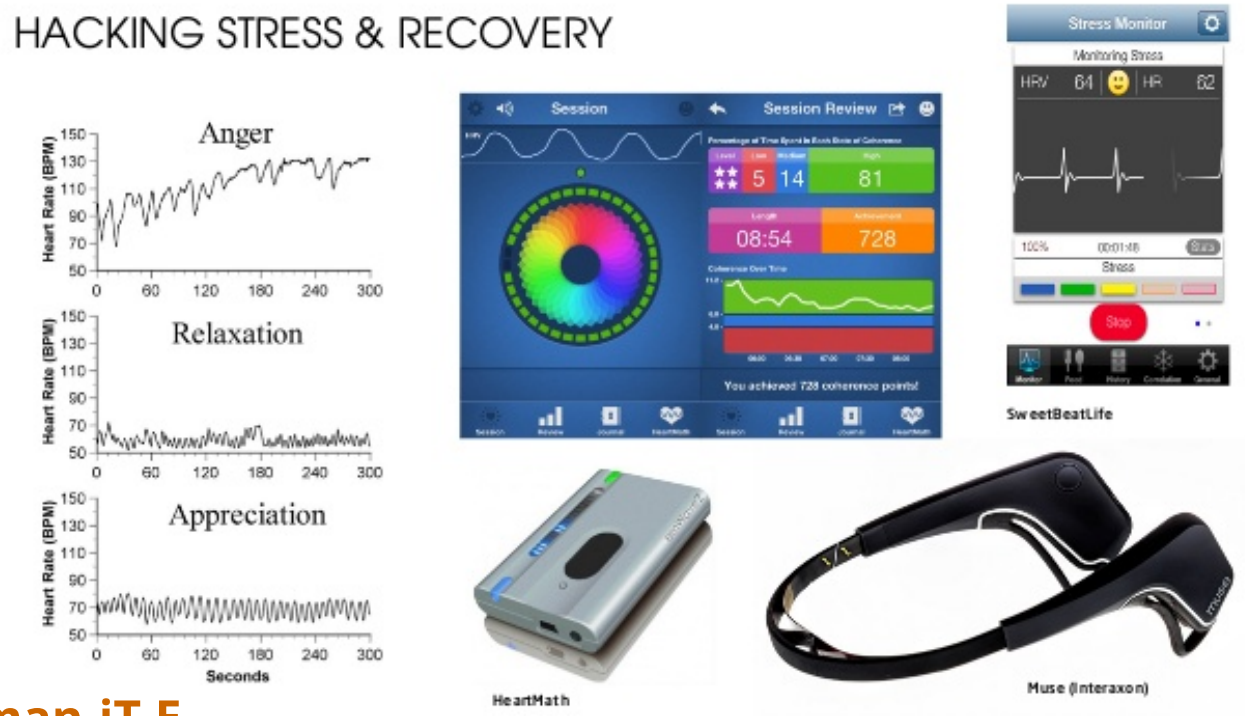
The predictive analytics produce Ai-based deep personalization of learning content for a truly individualized immersive experience.

3) Visualize Coaching

The Ai Engine uses the cognitive, motivational, and behavioral data to identify which content is working, and why. It then applies this to dynamic decision-making for individual performance optimization for cultural learners based on their behavior.

Robot-Proof Model





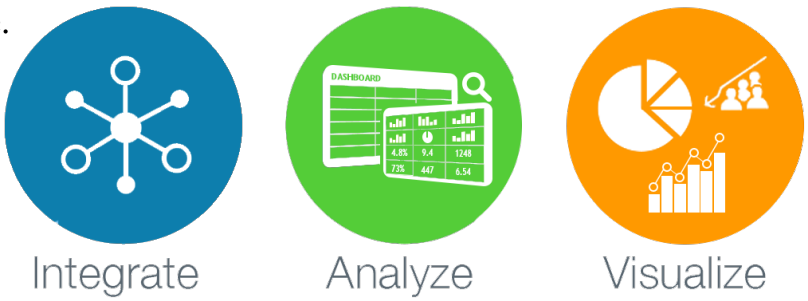
Human-iT-E.

Human-iT-E. is a data analytics company focused on creating a college campus culture of personalized data-driven decision making. We quantifying the negative health effects stemming from a lack of cultural agility to design predictive analytics models and algorithms to evolve campus life.

Our innovative Robot-Proof Model offers personalized immersive experiences for students to confront cultural bias in AR/VR mixed reality.

Mission

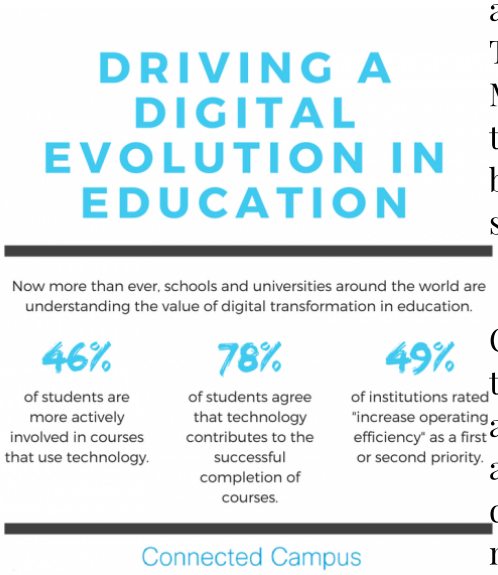
Human-iT-E. seeks to revolutionize how we communicate by using digital data to create a medium where marginalized members of society are able to speak to be heard. We expand upon Northeastern University experiential education model by merging practices around Emotional Intelligence to evolve how we communicate as a society. We believe in the power of empathy and use data to navigate the digital aspects of subconscious human behavior. We quantify the qualitative narratives and then connect it with human emotions in our effort to dismantle cultural ignorance.



"Whatever the creation, it must in some manner be original enough to evade the label of "routine" and hence the threat of automation. Instead of training laborers, a robot-proof education trains creators."

-Joseph Aoun
President Northeastern University
Author of Robot-Proof

"Understanding the importance of diversity is essential to human literacy. If students are to be life long learners, they must engage with a diversity of perspectives, including ones that challenge their presuppositions." -Joseph Aoun



Project Maturity

Human-iT-E. is currently a part of the 2018 AccelerateBOS Cohort. #AccelerateBOS provides entrepreneurs of color in the creative industries a cohort-based model for learning the foundational business skills to grow their ventures through a rigorous curriculum coupled with entrepreneurial mindset training and networking opportunities. Through the 6- month traditional MBA syllabus, we cover a variety of topics including finances, legal, business plans, pitching, capital, sales and business etiquette.

Stage 1: Infancy

Currently we are putting together the Proof-of-Concept by thinking about how best to measure cultural agility. Once we have the initial big data environment in place we will move to the next stage.

Stage 2: Technical Adoption

We need to acquire the technology needed to develop the quantified self model. We will use the tech to transform the integration of our research with the functions of our business. This stage will also involve big data exploratory analytics to ensure our model is scientifically sound.

Stage 3: Business Adoption

The next step in our evolution is to leverage our relationship with Northeastern University to pilot a 1-year study. This will allow for structured and unstructured analysis of model predictive analytic algorithms as it applies to the big data being collected.

Stage 4: Enterprise Adoption

After a successful integration into the Northeastern Echosystem, we are hoping to expand our case study to several area colleges and universities. The meta-data, quality, and governance across the various data sources will allow for predictive insights into business operations.

Stage 5: Data & Analytics as a Service

The end goal of this study is for Human-iT-E. to operate as a data service provider. As an innovator in our field, we hope to collaborate and share analytics across the enterprise.

How Robot-Proof Are You?

Students will need to be emotionally intelligent and culturally agile as we become a more connected global citizenry. Developing a personalized mixed reality operating model can break through student apathy toward confronting their own bias, and trigger a movement of cultural awareness. We have aligned our mission with Northeastern University's 2025 plan hoping to create buy-in. This research can serve as a beacon to demonstrate the model's potential. An evaluation of this study's capabilities can be used to determine which university levers are needed to best measure cultural agility.

There is no one way to develop a next-generation operating model. Every college and university's transformational journey will be different. Yet, we must embrace the Age of Humanics and use technology and empathy to help quantify the importance of cultural agility.