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# Writing Portfolio

Medical Writer • Storyteller • Instructor

[neurozee.com](http://neurozee.com)

# Content

Imagine a world where the complexities of medical science are unveiled, not as dry texts buried in journals, but as captivating stories, visual masterpieces, and interactive experiences. My medical writing portfolio combines scientific rigor and creative storytelling. I humbly request that while the items presented here are not bound by NDA, they should only be circulated for making hiring decisions.

Let me give you a tour of what you'll see in the next few pages.

## Scientific Writing

Dense 40-page research papers transformed into an elegant dance of words in conference posters. Even peer-reviewed journals can be page-turners with large citations.

## Healthcare Promotional:

I create marketing content that not only complies with industry standards but is so compelling, you'd want to read it twice.

## Infographics & Brochures:

These are your cheat sheets to the medical world. Digestible, fun, and so visually striking you'll want to hang them on your wall.

## Branded/Unbranded Content:

Regulatory guidelines meet gripping storytelling. The result? Medical content that you can't put down.

## Product Labels:

It's not just text on a box; it's your first interaction with a product. I make sure its eye-catching yet regulatory compliant.

## Science Translational Materials:

Imagine translating the language of cells and molecules into everyday chatter. I strive to make science approachable and relatable.

## Public Speaking Engagements:

I am often invited to give talks to stakeholders that summarize key results from subject matter experts (SMEs). Hear me talk about the latest high science trends in Artificial Intelligence in this section.

## Animations & Explainer Videos:

Who said medical science can't be binge-worthy? From 3D renderings of cellular processes to patient testimonials, it's medical prime time in here.

## Web Design & Social media:

Think of it as the digital stage where all these elements come alive, designed to pull you in and make you click that "share" button.

Ready to dive into the riveting world of medical storytelling with me? Go ahead. Scroll down.

## SCIENTIFIC WRITING:

# MANUSCRIPTS

An assortment of publications that showcase first authorship and collaborative research.

2,137 Citations

18 Manuscripts

2 patents

## HUMAN BRAIN MAPPING

[Hum Brain Mapp.](#) 2016 Nov; 37(11): 3911–3928.  
Published online 2016 Oct 6. doi: [10.1002/hbm.23285](https://doi.org/10.1002/hbm.23285)

PMCID: PMC6867365  
PMID: [27353970](https://pubmed.ncbi.nlm.nih.gov/27353970/)

### Dynamic functional connectivity shapes individual differences in associative learning

[Zainab Fatima](#),<sup>1</sup> [Natasha Kovacevic](#),<sup>1</sup> [Bratislav Mistic](#),<sup>2</sup> and [Anthony Randal McIntosh](#)<sup>1,3</sup>

February 01 2019

#### Functional connectivity-based subtypes of individuals with and without autism spectrum disorder

In Special Collection: CogNet

Amanda K. Easson , Zainab Fatima, Anthony R. McIntosh

 Check for updates

> Author and Article Information

*Network Neuroscience* (2019) 3 (2): 344–362.

[https://doi.org/10.1162/netn\\_a\\_00067](https://doi.org/10.1162/netn_a_00067) [Article history](#) 

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> [Soc Cogn Affect Neurosci.](#) 2007 Dec;2(4):313–22. doi: [10.1093/scan/nsm030](https://doi.org/10.1093/scan/nsm030).

#### Attending to the present: mindfulness meditation reveals distinct neural modes of self-reference

[Norman A S Farb](#)<sup>1</sup>, [Zindel V Segal](#), [Helen Mayberg](#), [Jim Bean](#), [Deborah McKeon](#), [Zainab Fatima](#), [Adam K Anderson](#)

Affiliations + expand

PMID: 18985137 PMCID: [PMC2566754](https://pubmed.ncbi.nlm.nih.gov/PMC2566754/) DOI: [10.1093/scan/nsm030](https://doi.org/10.1093/scan/nsm030)

[Free PMC article](#)

FULL TEXT LINKS



ACTIONS

 Cite

 Collections


# CONFERENCE POSTERS

Sample of conference poster presentation with literature review and references in the area of transcranial magnetic stimulation (TMS).

32 Posters

10 Countries

35 Collaborators



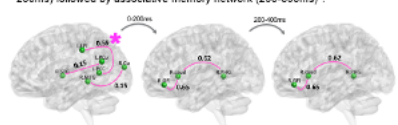
**Brain stimulation of functional networks for associative learning in aging**  
Zainab Fatima, Tommi Raji, Nils Schneider-Garces, Molly Herr Miller, Randy McIntosh, & Joel Voss.

NORTHWESTERN UNIVERSITY  
**FEINBERG**  
SCHOOL OF MEDICINE

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### Background

- Brain stimulation (rTMS at 20Hz) administered to parietal cortex can lead to greater network connectivity and better performance on memory tests in healthy young adults<sup>1</sup>.
- In an MEG study of associative learning, dynamic functional connectivity in parietal and hippocampal-cortical networks correlated with the rate of learning in young healthy adults. Fast learners recruited posterior parietal regions (first 200ms) followed by associative memory network (200-600ms)<sup>2</sup>.



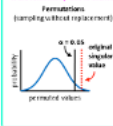
- Here, brain stimulation was administered to posterior parietal cortex (PPC) early during learning trials in older adults with the working hypothesis that stimulation would improve rate of associative learning.

### Methods (cont'd)

- Determine PPC regions that positively correlate with accuracy early in learning for each participant

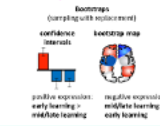
**Is the relationship due to chance?**

Permutation (shuffling subject responses)

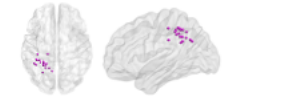


**Is the relationship reliable across subjects?**

Bootstraps (bootstrap with replacement)

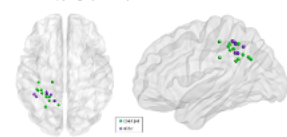


- Warp bootstrap map from PLS into FreeSurfer<sup>3</sup> space to determine target coordinate for stimulation using individual anatomy
- Distribution of PPC targets for study sample



### Stimulation parameters

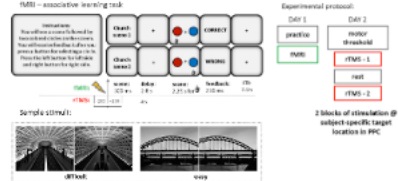
- Difference between active and sham locations?
  - not significant (Euclidean Distance)
- Interaction effect due to stimulation target locations?
  - Overlapping spatial spread



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### Experiment Design & Methods

MRI - associative learning task



Experimental protocol: Day 1 (practice, rTMS-1, rest, rTMS-2), Day 2 (practice, motor threshold, rTMS-1, rest, rTMS-2)

2 blocks of stimulation @ subject-specific target locations in PPC

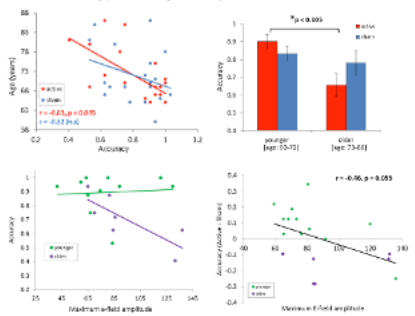
Sample stimuli: (scene, color) pairs

- 19 participants (age: 72 ± 7 yrs, 12F)
- Associative set: 3 scene-color pairs
- Plot learning curve per participant from fMRI and divide into early, mid, late phases
- fMRI data preprocessing in individual space: slice timing correction, motion correction, smoothing
- Brain-behavior individual PLS<sup>4</sup> analysis to find suitable targets for stimulation. Correlate accuracy with whole-brain activity patterns during different phases of learning

PLS engine:  $\text{Covariance matrix (brain-behavior correlations)} \times \text{singular value (effect size)} \times \text{data-driven contrast v.s. phases of learning (early vs. mid/late)}$

### Results - Behavioral Performance

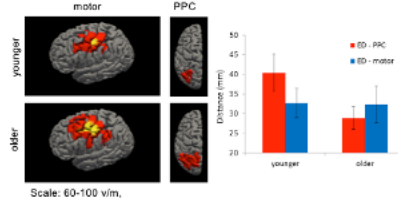
- Participants rated stimulus pairs on discrimination difficulty
- Majority of participants only learned 2 out of 3 sets of scene-color pairings
- Examined effects of brain stimulation on learned scene-color pairings
  - Easy pairs with high accuracy.



- Linear regression analysis with dependent variable – accuracy in active condition for easy pairs and independent variables- age and maximum e-field amplitude is significant ( $F = 5.952, p < 0.02$ ), accounts for 44.2% of the variance (R square)

### E-fields

- Greater the age, more the atrophy and CSF in PPC
- Compare e-fields for motor cortex vs. PPC
- Normalization of PPC e-fields by MT max reduces older e-fields even further suggesting that older have larger distance from MT location to PPC location
- Distance comparison between PPC and motor – not significant.



Scale: 60-100 vim.

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### Discussion

- rTMS increased associative learning accuracy in younger older adults but was associated with worse accuracy in participants that were older (> 72 years).
- With advancing age, brain has less capacity for plasticity<sup>5</sup>.
- Prior data has shown inverse relationship between cortical excitability induced by brain stimulation and age in sensorimotor systems<sup>6,7</sup>.
- Here, findings provide direct evidence that stimulation can impact learning and memory systems in the aging brain that interregional variation in atrophy must be taken into account when determining stimulation parameters.

### References

- Wang, J.-L., Liu, B., Rogers, E. Z., Gross, A. J., Datta, M. C., Datta, K. L., Choudhury, M. S., Vandenheuvel, J. L., Voss, (2014). *Science* 343(6120), 1005-1007.
- Fatima, Z., Raji, T., Schneider, N., Miller, M., Herr Miller, M., McIntosh, R. L., Voss, (2015). *Frontiers in Aging Neuroscience* 9, 1-10.
- Masliah, A., DeTeresa, R., LeVine, B., DeTeresa, R., (2006). *Neuroreport* 17(12), 175-179.
- Schneiders, R. and McIntosh, R. L. (2008). *NeuroImage* 41(1), 38-42.
- Tronel, L., Lavenex, P., Amaral, D. G., Amaral, M. G. (2008). *NeuroImage* 41(1), 38-42.
- Tronel, L., Lavenex, P., Amaral, D. G., Amaral, M. G. (2008). *NeuroImage* 41(1), 38-42.
- Tronel, L., Lavenex, P., Amaral, D. G., Amaral, M. G. (2008). *NeuroImage* 41(1), 38-42.

# EDITORIAL/PEER REVIEW

Sample of editorial peer-review experience for a top-tier journal in Neuroinformatics: an interdisciplinary field that combines modeling and neuroscience to understand complex neural systems.

5,559 Views

1,435 Downloads

69 Citations



## Accumulated source imaging of brain activity with both low and high-frequency neuromagnetic signals

Jing Xiang<sup>1\*</sup>, Qian Luo<sup>2</sup>, Rupesh Kotecha<sup>1,3</sup>, Abraham Korman<sup>1</sup>, Fawen Zhang<sup>4</sup>, Huan Luo<sup>5</sup>, Hisako Fujiwara<sup>1</sup>, Nat Hemasilpin<sup>1</sup> and Douglas F. Rose<sup>1</sup>

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<sup>3</sup> Cleveland Clinic Foundation, Department of Radiation Oncology, Cleveland, OH, USA

<sup>4</sup> Department of Communication Sciences and Disorders, University of Cincinnati, Cincinnati, OH, USA

<sup>5</sup> State Key Laboratory of Brain and Cognitive Science, Institute of Biophysics, Chinese Academy of Sciences, Beijing, China

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Recent studies have revealed the importance of high-frequency brain signals (>70 Hz). One challenge of high-frequency signal analysis is that the size of time-frequency representation of high-frequency brain signals could be larger than 1 terabytes (TB), which is beyond the upper limits of a typical computer workstation's memory (<196 GB). The aim of the present study is to develop a new method to provide greater sensitivity in detecting high-frequency magnetoencephalography (MEG) signals in a single automated and versatile interface, rather than the more traditional, time-intensive visual inspection methods, which may take up to several days. To address the aim, we developed a new method, accumulated source imaging, defined as the volumetric summation of source activity over a period of time. This method analyzes signals in both low- (1~70 Hz) and high-frequency (70~200 Hz) ranges at source levels. To extract meaningful information from MEG signals at sensor space, the signals were decomposed to channel-cross-channel matrix (CxC) representing the spatiotemporal patterns of every possible sensor-pair. A new algorithm was developed and tested by calculating the optimal CxC and source location-orientation weights for volumetric source imaging, thereby minimizing multi-source interference and reducing computational cost. The new method was implemented in C/C++ and tested with MEG data recorded from clinical epilepsy patients. The results of experimental data demonstrated that accumulated source imaging could effectively summarize and visualize MEG recordings within 12.7 h by using approximately 10 GB of computer memory. In contrast to the conventional method of visually identifying multi-frequency epileptic activities that traditionally took 2–3 days and used 1–2 TB storage, the new approach can quantify epileptic abnormalities in both low- and high-frequency ranges at source levels, using much less time and computer memory.

**Keywords:** magnetoencephalography, brain, multi-frequency, high-frequency oscillations, magnetic source imaging

**HEALTHCARE PROMOTIONAL:**

# UNBRANDED/BRANDED

Memoride (unbranded) or Sensoride (branded) is a brain training mobile app that uses neurofeedback to help seniors improve their memory and attention.

Excerpt from the client brochure (top) of the app is shown here. These outreach materials were developed to translate scientific concepts for HCPs and clients in prominent retirement communities such as Rivera, Chartwell, Aviva, and Kensington Health. Sample of peer-to-peer slide deck is shown (bottom) from branded campaign.



40% of people over 60 complain of some form of memory impairment

Until recently, the consensus was that the adult human brain was **UNCHANGABLE** beyond the age of 25 except for slow decline due to aging. Major breakthrough came with emerging evidence for brain's ability to rewire after stroke or to enlarge brain structures that are involved in repeated activities.

A famous study in 2006 by Eleanor Maguire and colleagues showed that London's taxi drivers had more gray matter in the hippocampus, a brain area related to memory and spatial navigation. We now know that experiences and lifestyle continue to shape the brain throughout the lifespan. This is called **NEUROPLASTICITY**.

Despite scientific evidence, the status quo remains: decline in brain function is considered a part of "normal aging". As neuroscientists, we challenge this deep-rooted notion. Capitalizing on the new wave of brain sensing technology we have translated some of the most exciting research in **NEUROFEEDBACK** and are now making it accessible to the public.

**MEMORIDE** is a supervised and personalized training tool for exercising brain areas responsible for memory and attention.

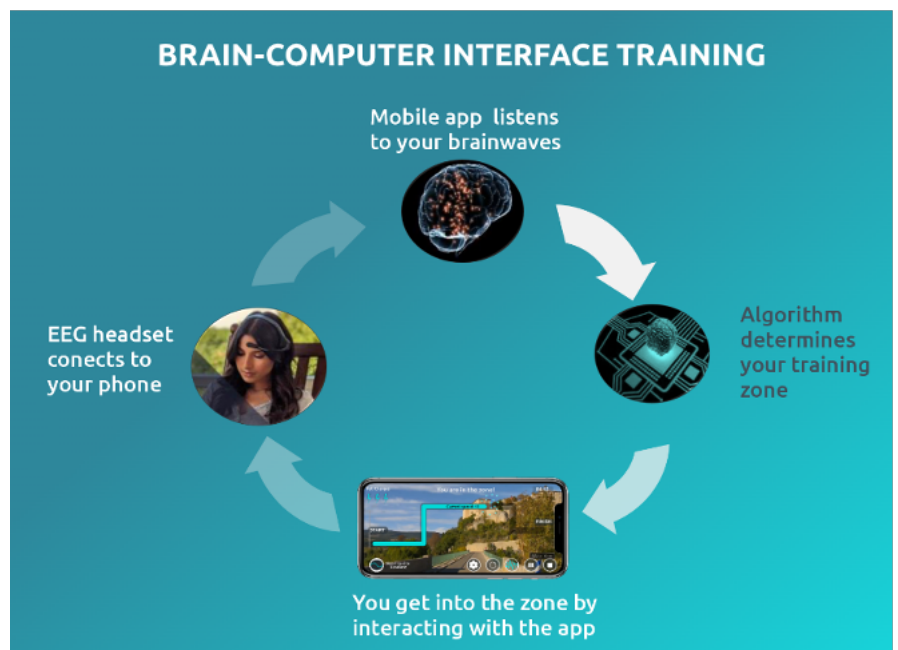


Neurofeedback is a technique that displays real-time information about brain processes. By seeing one's own brain in action it is possible to mobilize different brain waves and instill **LONG-TERM IMPROVEMENTS**. The changes in the brain start immediately, while repeated and consistent training promotes neuroplasticity and resilience.

Training with **MEMORIDE** requires a wearable brain sensor, and a mobile device (iPad). The training algorithm provides continuous feedback about brain wave patterns associated with demanding cognitive processes in the frontal executive network. Research shows that this exercise leads to significant increase in **memory** and **attention**, with particularly strong improvements for seniors.

How is this different from brain training games:

- **MEMORIDE** continuously answers the "how am I doing" question with direct measures of brain's engagement.
- Brain games train specific skills with no or very limited value for real-life situations, **MEMORIDE** targets the **GENERAL COGNITIVE SKILLS**
- Intuitive learning and user-friendly interface makes **MEMORIDE** accessible even to people who have difficulty following instructions.



HEALTHCARE PROMOTIONAL:

# PRODUCT LABELS / PACKAGING

Copy of product labels that are regulatory compliant.

Peeler afin de lire en Français.  
Pelar para poder leer en Español.

Expte: Nov, 2022

Pen Sanitizers

Let: 20-0412

PPE Kits

f @ in  
@CandidClean  
#SANITIZEYOURWAY

MANUFACTURED BY:  
Candid Clean Corp.  
2679 Bristol Circle #6,  
Oakville, Ontario  
L6H 6Z8  
Canada  
1-855-939-1004  
WWW.CANDIDCLEAN.COM

**CANDID CLEAN**

**75% ISOPROSPANOL**  
SANITIZER

75% D'ISOPROSPANOL

**PEPPERMINT**  
Menthe Poivrée

---

100 ml • 3.38 fl oz      NPN 80104281

**PURPOSE:** Anti-bacterial skin cleanser. For personal hand hygiene to help prevent the spread of bacteria.

**USE:** Shake well. Rub thoroughly into hands for at least 30 seconds. Allow to dry.

**CAUTION:** For external use only. Flammability warning. Keep away from open flame and sources of heat. Keep out of reach of children. If swallowed, call a poison control centre or get medical help right away. Stop use and consult a health care provider if irritation develops. When using this product avoid contact with eyes. If contact occurs, rinse thoroughly with water.

**RECOMMENDED STORAGE CONDITIONS:** Do not store above 43°C or 109.4°F. Avoid direct exposure to heat.

**CONTRAINDICATIONS:** If known allergies exist to essential oils or fragrance listed, refrain from use. Do not use on children/infants less than 2 years of age (unless directed by a health care provider).

**MEDICINAL INGREDIENTS:** ISOPROPYL ALCOHOL 75%  
**NON-MEDICINAL INGREDIENTS:** DISTILLED WATER, HYDROGEN PEROXIDE, GLYCERIN, JOJOBA SEED OIL (TRACE AMOUNTS), PEPPERMINT ESSENTIAL OIL



Peeler afin de lire en Français.  
Pelar para poder leer en Español.

Expte: Nov, 2022

Pen Sanitizers

Let: 20-0412

PPE Kits

f @ in  
@CandidClean  
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Canada  
1-855-939-1004  
WWW.CANDIDCLEAN.COM

**CANDID CLEAN**

**75% ISOPROSPANOL**  
SANITIZER

75% D'ISOPROSPANOL

**ROSE OIL**  
Huile de rose

---

100 ml • 3.38 fl oz      NPN 80104281

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**NON-MEDICINAL INGREDIENTS:** DISTILLED WATER, HYDROGEN PEROXIDE, GLYCERIN, JOJOBA SEED OIL (TRACE AMOUNTS), ROSA DAMASCENA ESSENTIAL OIL

# INFOGRAPHICS / BROCHURES

Example of a bilingual educational brochure to teach kids how to wear masks in the public health domain.

## Let's Get Candid!

### How to Wear a Mask

- Sanitize hands before wearing your mask
- Adjust mask ear loops for snug + comfy fit. Try it right-side up or upside down
- Remove sticker. Apply nosebridge on mask, bend in place
- Avoid touching your face, if you do, sanitize hands
- Use a different coloured mask everyday to stay clean. Wash all masks together, reuse, and save the planet!

### Do your Ears Hurt?

Wear lanyards!

Adjust ear saver button clasps to head size

Loop mask toggle over button on headband

### Breathe Clean

- Do not wash filter with mask
- Toss filter after ~10 uses
- Replace filters

### Keep Hands Healthy

- Paper soap = 50 hand washes
- Wash for 30 sec
- Use elbow to close tap
- Wash hands before + after eating

### Keep Play Safe

- Sanitize bag straps
- Always carry a spray pen
- Don't swap masks

2 meters

CANDID CLEAN

## Devenir Candid

### Comment Porter ton Mask

- Désinfectez les mains avant de porter ton masque
- Ajustez les boucles du masque pour un bon ajustement. Portez à l'endroit ou à l'envers
- Enlevez l'autocollant. Appliquez + pliez la bande du pont de nez
- Ne touchez pas votre visage, si vous le faite désinfectez vos mains
- Utilisez un masque de couleur différente chaque jour pour rester propre. Lavez tous les masques ensemble, réutilisez et sauvez la planète!

### Est-ce Que Tes Oreilles font Mal?

Porter des cordons!

Ajuster les fermatures à bouton à la taille de la tête

Boucler avec le bouton sur le bandeau

### Respirez Propre

- Ne laver pas le filtre avec le masque
- Jetez les filtres après ~10 utilisations
- Remplacer les filtres

- Sevon en papier 50 lavage à la main
- Levez pendant 20 secondes
- Utilisez votre coude pour fermer le robinet
- Levez les mains avant et après de manger

### Jouez en Sécurité

- Désinfectez les sangles du sac
- Ayez toujours un stylo aérosol sur vous
- Ne change pas de masque

2 mètres

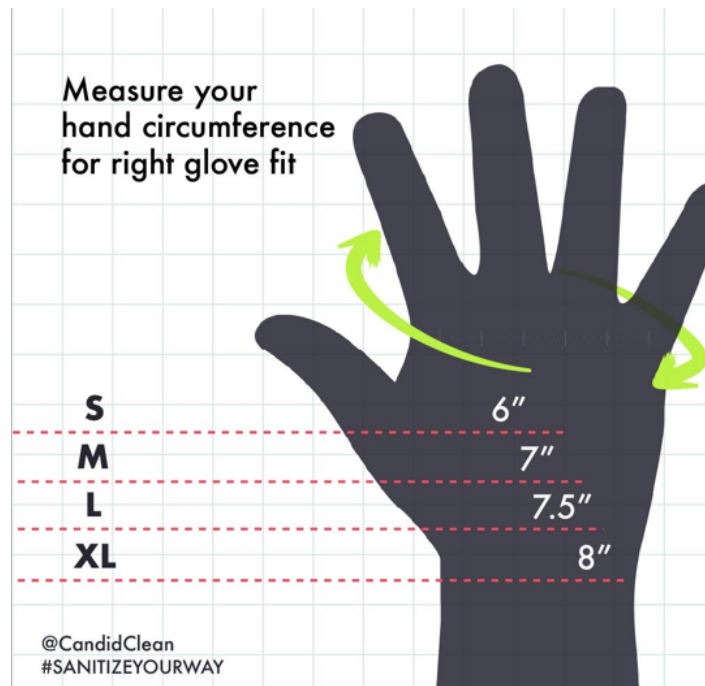
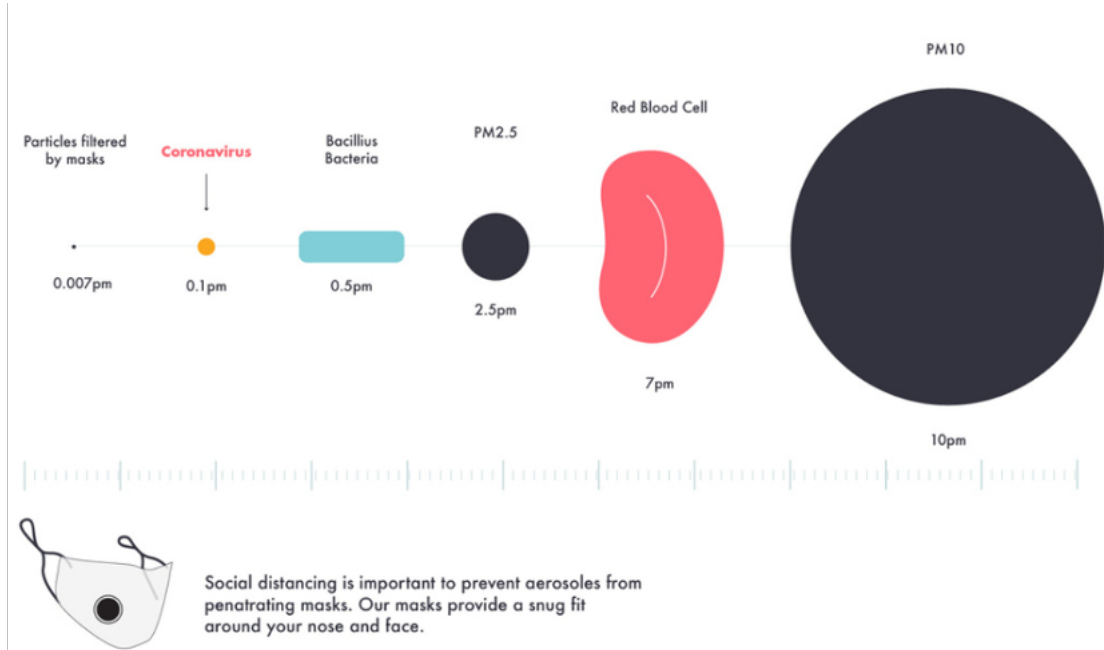
CANDID CLEAN



HEALTHCARE PROMOTIONAL:

# SCIENCE TRANSLATIONAL MATERIALS

Example materials for distribution through social media and peer-to-peer slide decks. The examples shown are specific to personal protective equipment (PPE)



# USER MANUAL

Here is a user manual developed for Candid Clean – a company that formulated Health Canada approved hand sanitizer and Made in Canada sanitizer stands during the pandemic.

## HOW TO USE THE CANDID STAND

1-855-939-1004  
sales@candidclean.com



**1**

### REMOVE THE BACK

To open the back panel, unscrew the 3 nylon thumb screws. Use the black handle to lift up (be mindful of bottom screw) and off.



**2**

### PULL OUT THE TRAY

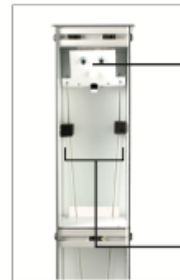
Take the tray out to clean and replace with Candid Clean 1L refill bottle.



**3**

### UNLOCK BOTTLE

Twist cap of new bottle to release trigger before placing in tray.



Use finger to lift flapper to position bottle.

**4**

### LIFT FLAPPER

Rubber pads keep bottle secure.



**5**

### BOTTLE PLACEMENT

Slide the tray and the bottle under the lifted flapper between the two rubber pads until the bottle's nozzle is fully out of the front window. Make sure the nylon screw sits above the bottle's pump. Release flapper.



**6**

### REFILL STORAGE

Store extra refill bottle at the bottom of the stand for quick change.



**7**

### STEP ON PEDAL

Step on pedal to prime the spray nozzle. Step on pedal again to make sure the spray is a fine mist. Then, re-attach the stand's back panel with the 3 nylon thumb screws.



**8**

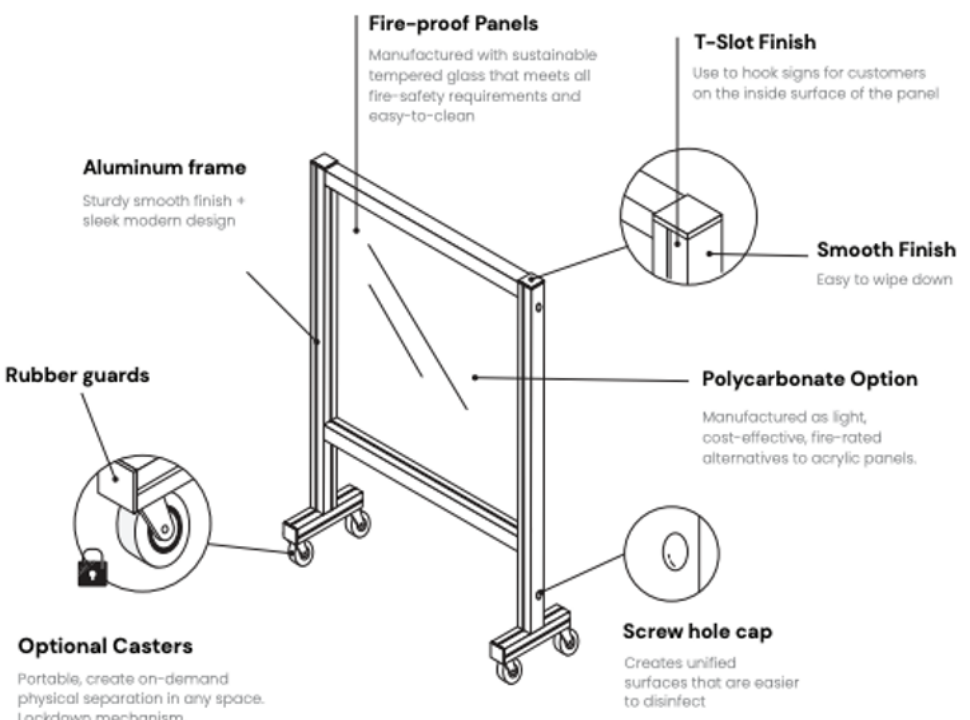
### SANITIZE HANDS

Place both hands below the nozzle and step on the pedal to dispense Candid Clean. One pump is sufficient to sanitize both hands.

# SPECIFICATION SHEET

Here is a spec sheet for portable safety barriers created for HCFs and clinics during the pandemic.

## SAFETY BARRIERS



**Fire-proof Panels**  
Manufactured with sustainable tempered glass that meets all fire-safety requirements and easy-to-clean

**T-Slot Finish**  
Use to hook signs for customers on the inside surface of the panel

**Aluminum frame**  
Sturdy smooth finish + sleek modern design

**Smooth Finish**  
Easy to wipe down

**Polycarbonate Option**  
Manufactured as light, cost-effective, fire-rated alternatives to acrylic panels.


**Rubber guards**

**Optional Casters**  
Portable, create on-demand physical separation in any space. Lockdown mechanism.

**Screw hole cap**  
Creates unified surfaces that are easier to disinfect

---

- ✓ Versatile, protective barriers create social distance for interior spaces to limit the spread of airborne particles
- ✓ Entirely customizable sizes to partition spaces according to occupancy
- ✓ Desktop barriers can be arranged in confined spaces to create physical separation
- ✓ Portable barriers with castors are essential for classrooms, board rooms and community centres



**CROWD CAN**

#6-2679 Bristol Circle, Oakville, Ontario  
Canada L6H 6Z8

**HEALTHCARE PROMOTIONAL:**

# PITCH DECK

A set of slides from a pitch deck for MaRs Venture Labs for Memoride (unbranded).

**PROBLEM**

**AGING** 40% of people over 60 years have some form of memory impairment. After age 65, the risk of dementia **DOUBLES** every 5 years.

**MEMORY** 20 30 40 50 60

In 15 years, **25%** of the population in North America will be over 65.

It takes **3** people to care for **1** person with **DEMENTIA**.

**GO-TO-MARKET**

**B2B - Phase 1**  
Diluted price  
Supervised training  
Retirement homes in Canada, USA  
Physiotherapists, Audiologists, Yoga

**B2C - Phase 2**  
Tech savvy  
Younger baby boomers  
Children of older people  
Appstore + Google Play

**COMPETITION**

lumosity brainHQ CogniFit

**FUNDING**

**B2B SALES & MARKETING** 10K

**VALIDATION** Salary support for post-doctoral fellow 15K

**UX/UI + APP DEV** Optimize UI Gamification 10K

**R & D** Equipment and development for validation 5K

**DATA ANALYSIS PIPELINE** 10K

**PROPRIETARY ENGINE**

**TECHNOLOGY**

**CLOUD** Gearing up for **BIG DATA MINING**

**Multi-user MOBILE APP Prototype**

**WEB PORTAL** For remote monitoring

**TEAM & NETWORK**

YORK UNIVERSITY Virtual Walk & Cycle DVD

**PROOF of CONCEPT**

B2C B2B AMERICAN BRAIN COUNCIL

**BIG IMPACT**

**EFFECTIVE ↔ SCALABLE**

Strong research evidence for **SIGNIFICANT** improvements in memory and attention. Neurofeedback **TRULY REWIRES** the brain.

Good quality **WEARABLE EEG** devices are **AVAILABLE** and **AFFORDABLE** on the consumer market.

It is **POSSIBLE** to age and retain cognitive skills. **SUPER-AGERS** are people whose cognitive performance is comparable to those that are several decades younger.

Training with MEMORIDE is **INTUITIVE** like learning how to ride a bike. **ACCESSIBLE** even to people who have difficulty following instructions.

**PUBLIC SPEAKING ENGAGEMENTS:**

# INVITED TALK

A presentation on how to use AI to boost productivity and creativity in the workplace. Click on thumbnail to redirect to YouTube.

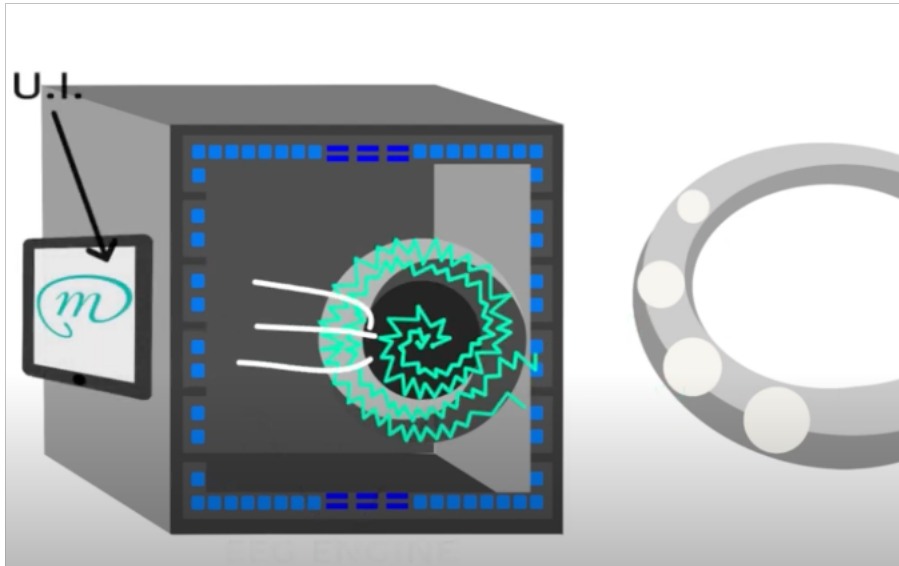
The image shows a YouTube video player interface. At the top left is the YouTube logo with a search bar. The video title is "Analytics Insight". The main content area features a portrait of Dr. Zainab Fatima on the left. To the right of the portrait is a graphic with the text "WORLD Data CONGRESS BUSINESS IMPACT OF CHATGPT AND GENERATIVE AI". Below this is a pink callout box with the title "Unlocking Business Potential: Harnessing the Power of AI for Productivity, Creativity, and Financial Success". Underneath is "KEYNOTES PEAKER" and "Dr. Zainab Fatima" in a large, stylized font. At the bottom of the graphic, it lists her roles: "STRATEGIST, AI GURU, FUNDRAISER, DATA SCIENTIST, MEDKNOWL INC, CANADA". The video player controls at the bottom show a play button, a progress bar at 0:03 / 41:51, and various settings icons. Below the player, the video title "Unlocking Business Potential: Harnessing the Power of AI" is repeated.

**DIGITAL MEDIA:**

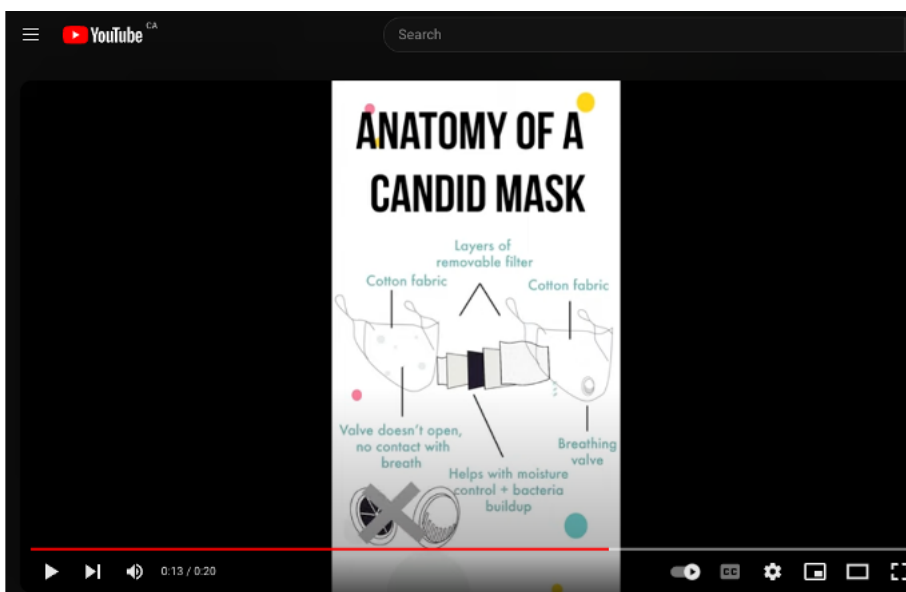
# ANIMATIONS

Animation made for explaining the mechanism behind Memoride to nurses and support staff in retirement homes.

Click picture for YouTube link.



Instagram story and animation made for explaining the anatomy of a high-quality cotton mask for preventing COVID19 transmission to everyone.



# EXPLAINER VIDEOS

Explainer videos about unlocking the business potential of AI. Click thumbnails for YouTube links.

## Measuring Productivity

- Workplace culture
- Utilization vs. Productivity
- Facetime Culture
- Need to incentivize deep learning

FORBES > LEADERSHIP > CAREERS

### Employees Using ‘Productivity Theater’ To Protect Against Surveillance, Study Finds

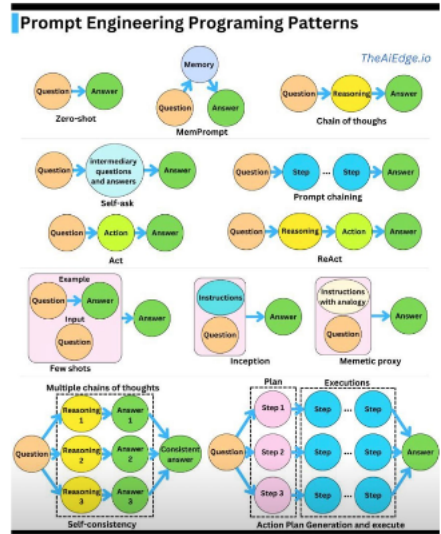
Bryan Robinson, Ph.D. Contributor ©  
author of CHAINED TO THE DESK IN A HYBRID WORLD (NYU Press, 2023)

May 1, 2023, 06:36am EDT

Follow

## Prompt Engineering

- Planning how to leverage AI is fundamental to how we solve problems
- Word limits and tone are critical



# SLIDE DECKS

Slide decks created for a digital learning course – Homeself. This was an industry sponsored project where complex principles of neuroscience were distilled into concepts that were easy-to-understand for professionals in the interior design and construction industries. I was also a part of a live discussion with a talk show host to answer questions related to content. Click on High vs. Low Road slide for YouTube redirect.

## Cognitive Battery

*\*finite and limited resource*

### Stress

mental fatigue, reduced concentration  
feelings of depression, sadness, incompetence  
difficulty with tasks  
maintaining productivity

### Calm

mental clarity, focus, concentration  
feelings of excitement, accomplishment  
goals are met  
targets are achieved

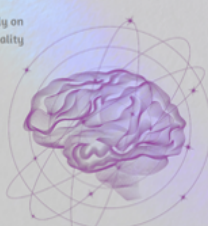


Homeself

## State

**Environmental perturbation**

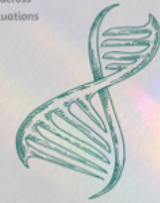
- transient
- not based solely on inherent personality or genetics



## Trait

**Genetics + Environment**


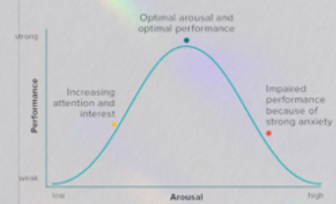
- stable and pervasive
- consistent across different situations



Homeself

## On the Mood Spectrum

*\*way to understand your initial vs. final state*



Homeself

## High vs. Low road

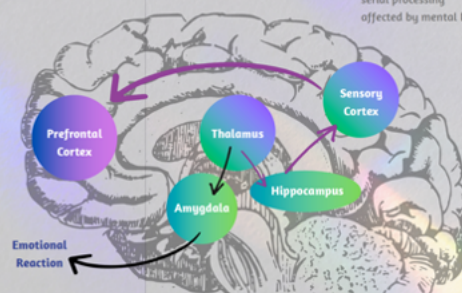
*How your brain processes moods and thoughts*

### Reflexive "low road"

- impulsive
- spontaneous
- faster processing
- fast learning
- parallel processing
- not affected by mental load

### Reflective "high road"

- intentional
- controlled
- slower processing
- slow learning
- serial processing
- affected by mental load



Emotional Reaction

Homeself

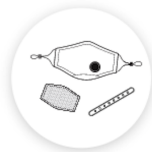


# WEB DESIGN

Copy for Candid Clean's website: candidclean.com  
Click on image to take you to the website.

## GET CANDID

We provide licensed personal protective equipment and sanitization products to meet ongoing health and safety challenges in the global marketplace.



### Mask Packs + Accessories

Adults | Kids | Paper Soap | PM2.5 Filters



### Stand & Refill + Disinfectants

Canadian-made | Patent Pending



### Scented Sanitizers

Health Canada Approved



### Medical PPE

Gloves | Gowns | Shields | Masks

## WHY CHOOSE US?



### Educational & Scientific

Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam



### Licensed & Approved

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### Environmentally-friendly

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### Best-in-class

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### Access to Global Marketplace

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# SOCIAL MEDIA MARKETING

Brief snapshot of copy and design of a sample social media marketing campaign with a mission of science education. Live feed is available @candidclean. Click on thumbnail for redirect.

