

Coding Chat

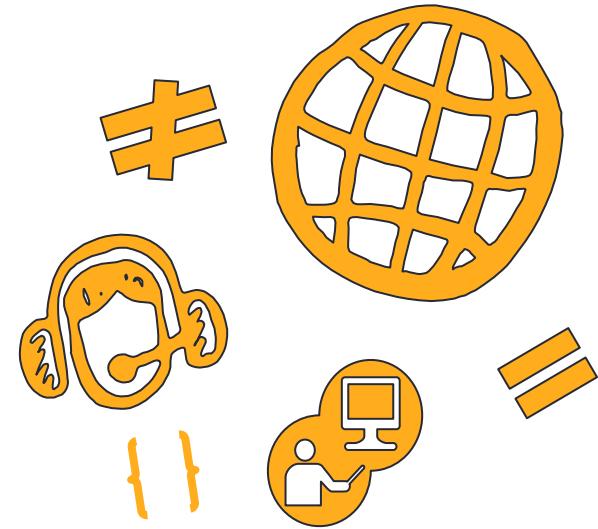


1. What Is it?



Virtual Reality Classrooms

Learn, socialize, get help and
get inspired!



The Portals



Lessons
The user can attend lessons and learn a programming language (up to three languages) to choose from: Java, Python, C++)(at their own pace



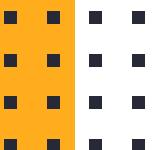
Cafe
Users can socialize amongst each others and talk about Computer Science related subjects or anything else (so long as it's appropriate).



Help Desk
Based off our University's own, we believe a Help Desk with tutors would be beneficial to students struggling to understand a language or a concept.



Sessions
Volunteer guest speakers would be a critical foundation for our program. We would want any speaker who is involved in any STEM field to speak to the users.



Classroom Curriculum



Slower

|

Regular

|

Faster

"NetDragon teaching headsets will use sensors to watch each student's behavior on a one-to-one basis. Teaching will be slowed down for students who need to go at a slower pace and sped up for smart kids who might get easily bored." (*The Fourth Transformation*, pg. 105)

- We would want to use this or similar technology to include every person regardless of their pace with a virtual teacher.

Different time zones? No problem.



Lessons, seminars, help desk, and cafe times would be categorized and held by different regions

Cafe Discussions



Discussion posts in online classes almost always result in no student ever commenting on the thread, leaving everyone in the class strangers. The anonymity of using avatars could ease some social anxiety and promote socialization among the user's peers.



Help Desk



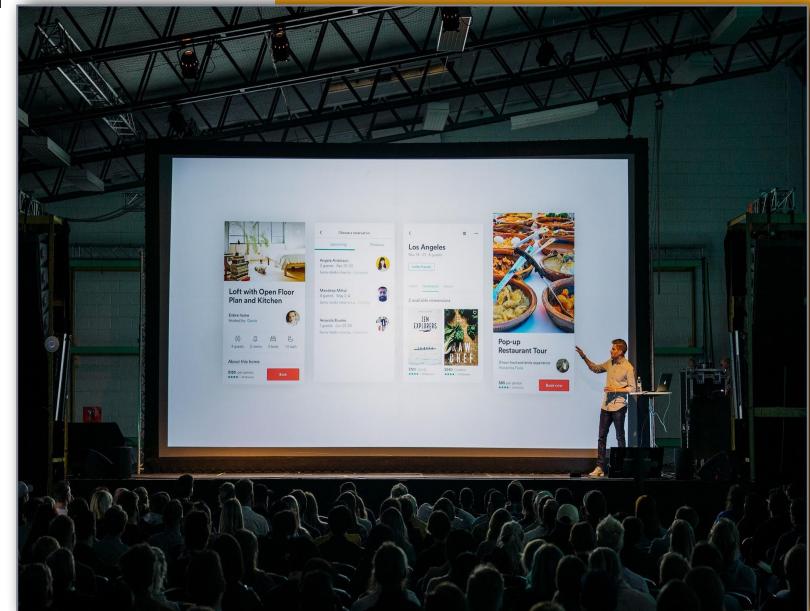
The hardest part of learning a new programming language is feeling like you have to learn it all on your own. An open help desk staffed with tutors would encourage users to ask more questions and get involved.



Seminar | Guest Speakers



Companies, inspirational speakers, or anyone with a great vision would be perfect for the seminars that could be held virtually in the portal. Q and A sessions could be held afterwards as well.



2. Why?

Benefits, the future, and
underrepresentation



“

MindMaze uses patented technology to let players in headsets move around...with brainwaves rather than hand controls...”



Coding While Disabled



- “...MindMaze uses similar brainwave headsets to treat amputees, stroke survivors, and victims of irreparable brain and spinal trauma”
(The Fourth Transformation, pg. 90)

We want to use this or similar technology to make coding accessible for those who are disabled. By using the headset, their brainwaves could code for them!

Attention Span in Children



- MindMaze technology said to have helped children with severe burns get their wounds cleaned without noticing! (*The Fourth Transformation*, pg. 91)

Depending on how engaged a child is, a VR classroom has the capacity to retain a child's attention much more than a normal classroom setting would.

Mental Health Benefits

- “We conclude that VR has the potential to transform the assessment, understanding and treatment of mental health problems.” (*Virtual reality in assess...*, Cambridge University Press)

Coding Chat could help people with social anxiety, PTSD, and other phobias. The avatars used in the VR space could make others more approachable, including the virtual teacher.

3. Special Features

Tap technology, Google Expedition, etc.



Tap Technology



Within the classroom, a student can use Tap technology to type if they cant to have lessons without the hassle of needing a keyboard and flat surface.

- Special keyboard in Coding Chat to allow special characters to be used
- Move in VR and interact with other users with hand gestures
- In classrooms, lock on a chair and use Tap to move yourself closer or farther away from a screen





MindMaze: Detect brainwave signals to target buttons to code and move

“

Google Expedition is a kit
for teachers who want to
take their pupils on
virtual field trips...

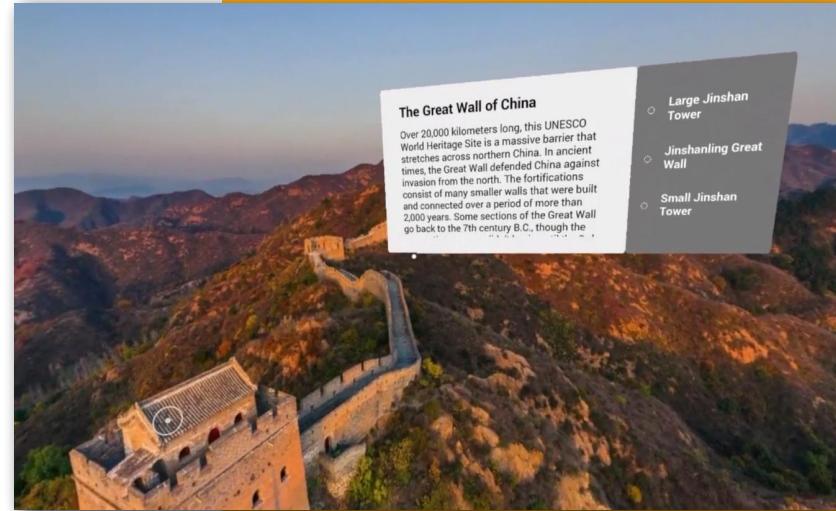


Google Expedition



- “[providing] 3D tours of more than 200 destinations including coral reefs, Antarctica...” (*The Fourth Transformation*, pg 103)

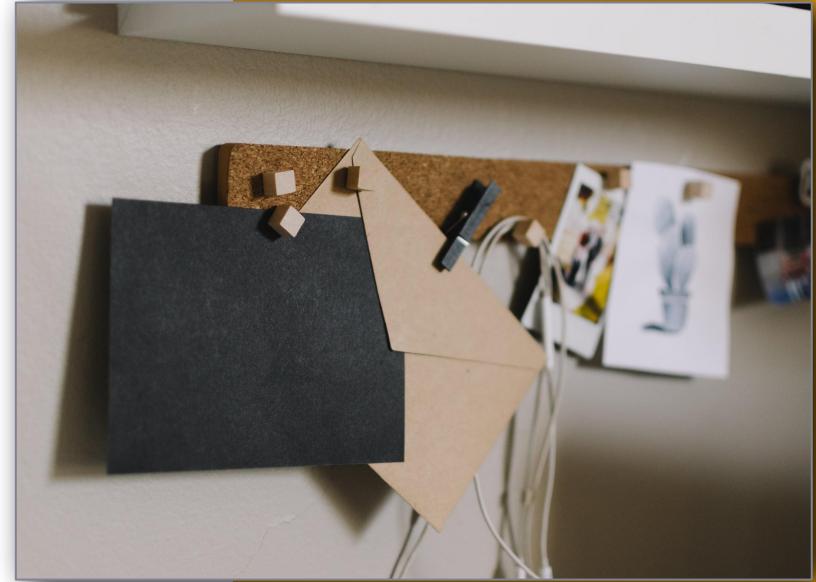
Seminars could be hosted by companies and users can be taken on virtual tours of the company/day in the life of an employee.



Corkboard of Events



In each classroom, a corkboard would be at the back with future seminars (or current), announcements, challenges, and more. This would be an important part of our classroom setting to make sure every user takes advantages of each opportunity posted.



4. Outreach

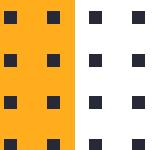
How can unrepresented communities benefit?



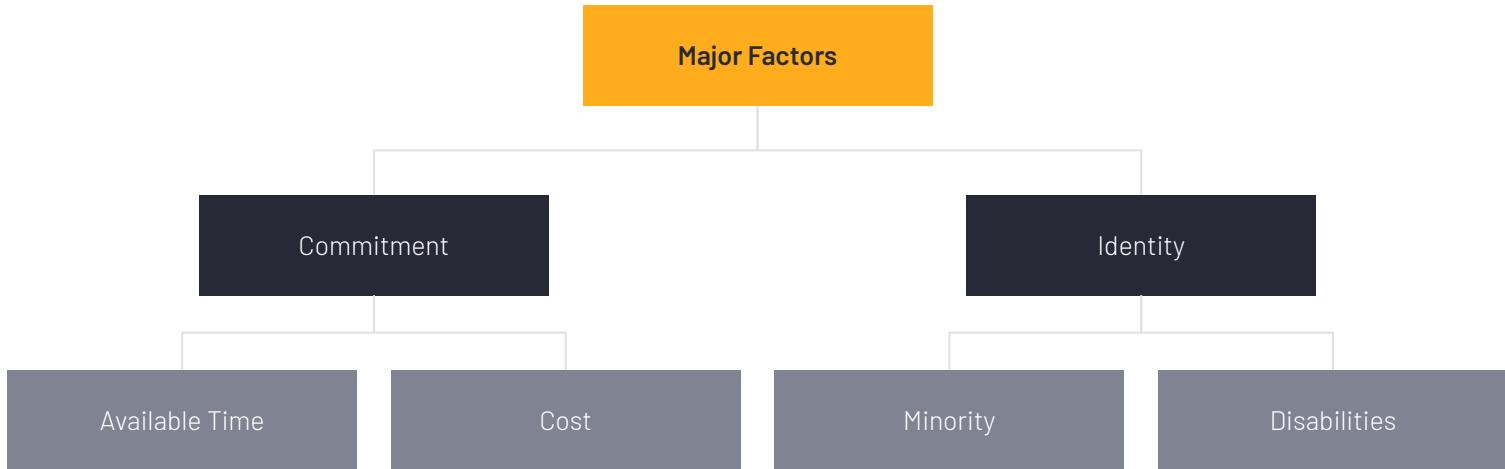
Why is it important?



Everyone deserves the opportunity to explore their interests in the Computer Science field. It is doing the subject and the people a disservice by not taking into consideration every person's experience.



Challenges !



Identity



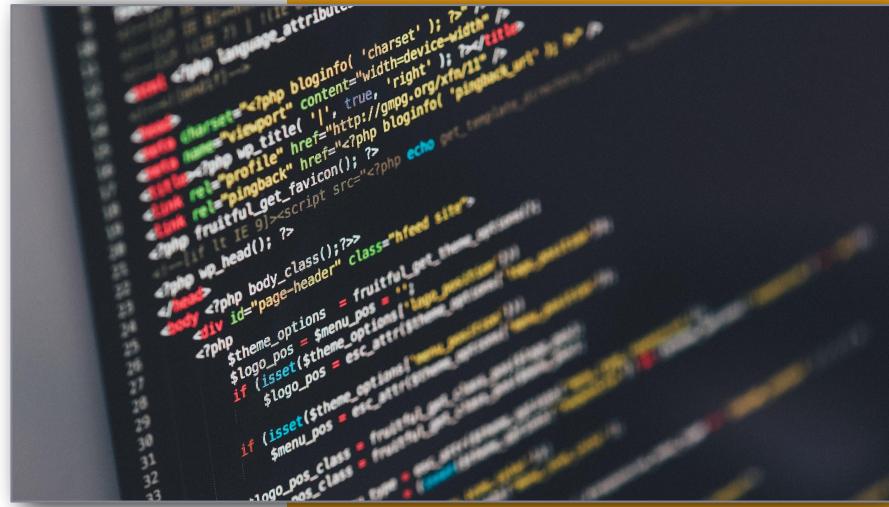
Every identity is important:

- By everyone having avatars (including the virtual teacher who you may change in appearance—maybe someone that looks like the you), it can help with unconscious biases. No one knows your race, age, sexual orientation, or able-bodiedness.
 - Though it is optional to choose a cafe with people who identify like you, whatever that may be.
- Diverse seminar speakers to speak on their experiences with a multitude of different topics



Commitment

- With virtual teachers, lessons are able to be available 24/7
 - With worldwide time zone slots, seminars will be held at different times according to their region and anyone can enter (though there could be language barrier)
- 24/7 Cafe of a region of your choosing
- In future, VR technology is expected to go down, but for now, we want the program to be free for users, sponsored by companies.
 - The only cost to the user would be the technology to enter (VR headset, keyboard/tap, etc.)



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Credits



Images:

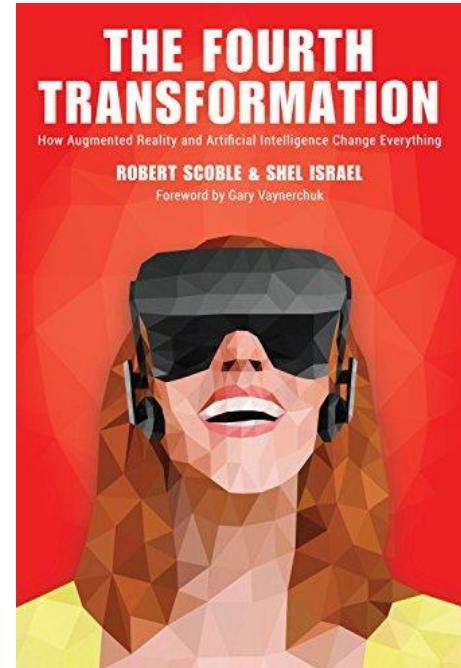
- *Unsplash* (free commercial/personal use)
- *Tap Technology*
- *MobileMarketing/Google Expeditions*

Written Text:

- *Virtual reality in the assessment, understanding, and treatment of mental health disorders* (Cambridge University)
- *Can Virtual reality exposure therapy gains be generalized to real-life?* (Morina N, ettc.)
- *Virtual reality exposure-based therapy for the treatment of post-traumatic stress disorder...* (Cristina Botella, etc.)
- *The Fourth Transformation* by Robert Scoble & Shel Israel

■ ■ ■ Presentation Stickers:

- <http://handdrawngoods.com/freebies/>





Thank you!

Slides by:

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- Madeline Watts