



Percussion Delusion

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Materia:

Construcción de Software y toma de decisiones - Ingeniería de Software

Grupo: 401

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link: <https://youtu.be/DhJkjjxu9JU>

Proposal

The objective of our game is to instruct children between 7 and 15 years of age to acquire habits regarding the use of hearing protectors. In addition, we include a rhythmic base in the game levels and when the player must pass over an object, the sound of a drum will anticipate the action. this will help stimulate the player to differentiate low sounds from high ones.

Functional Specification

The video game will begin on a login screen, where by filling in your data, it will begin with a series of 3 questions focused on the consent and use of hearing protectors. When the player answers them, he will enter a minigame where a rhythm will be heard and a slight sound will be heard indicating (intuitively) that the player must do an action (jump or slide) to avoid losing.

System Architecture

The videogame users through Unity will sign in their data so that it will be sent through Nest.js into an SQL Database in Azure with the purpose of storing the data of their playtime and game decisions to analyze about their motor functions and musical knowledge. Meanwhile, the Game Managers will be able to manage the data given by the users to create queries from the same database. Finally, PAS members have the ability to access to a different Database that is

more visual to help them interpret the data in a visual more digestible way.

Data Base

For the database we chose to use the built tools of Microsoft Azure in specific Azure Data Base, in which we set up a server and create our database to manage the information of our video game, as mentioned above for statistical purposes we generate random scripts to have at least one group with which we can perform different analyses, but from the part of Unity and using React.js libraries we can make individual revenue through a remote connection to our server on Azure.

The group generated with our random scripts to get statistics was 3000 users, with which, by means of a MySQL process, we were able to get for each user a question randomly selected from our questions and a small point count based on that decision. All this data for practical purposes was linked to tableau through our online server and we started to generate analyses. that we present on the website for the trained partner and so you can see the different type of information you might get when using our game and how they might take advantage of it.

Mount server on azure



Azure SQL ✨ ...

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+ Crear ⌚ Reservas ⚙ Administrar vista ▾ ↻ Actualizar ⬇ Exportar a CSV 🔗 Abrir consulta | 🏷 Asignar etiquetas 🗑 Eliminar

Filtrar por cualquier campo Suscripción == todo Grupo de recursos == todo × Ubicación == todo × + Agregar filtro

Sin agrupar ▾ Vista de lista ▾

<input type="checkbox"/> Nombre ↑↓	Tipo d... ↑↓	Nivel de servicio ↑↓	Grupo de recursos ↑↓	Ubicación ↑↓	Suscripción ↑↓
<input type="checkbox"/>  PAS (pasx/PAS)	Base de dat...	Básico: 5 DTU		South Central US	Azure for Students ***
<input type="checkbox"/>  pasx	SQL Server	--		South Central US	Azure for Students ***

Backend database connection

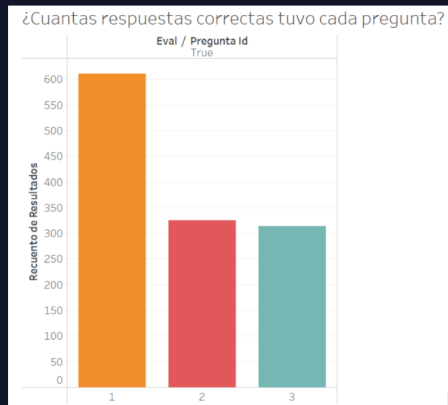
```
1 <?php
2 // PHP Data Objects(PDO)
3 try {
4     $conn = new PDO("sqlsrv:server = tcp:pasx.database.windows.net,1433; Database = PAS", "pasx", "{your_password_here}");
5     $conn->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
6 }
7 catch (PDOException $e) {
8     print("Error connecting to SQL Server.");
9     die(print_r($e));
10 }
11
12 // SQL Server Extension
13 $connectionInfo = array("UID" => "pasx", "pwd" => "{your_password_here}", "Database" => "PAS",
14 "LoginTimeout" => 30, "Encrypt" => 1, "TrustServerCertificate" => 0);
15 $serverName = "tcp:pasx.database.windows.net,1433";
16 $conn = sqlsrv_connect($serverName, $connectionInfo);
```

Table user from database

	gamerTag	password	name	gender	age	nacionalidad	currentStag
1	a.feugiat.tellus@icloud.c...	YIU44QIY7IN	Kyla Richards Mills	Male	44	Ireland	2
2	a.feugiat.tellus@msn.ca	MEM82JSE9QB	Simone Blackburn Levy	Female	84	Ukraine	3
3	a.neque.nullam@hotmail.co	SFN620QD80M	Althea Morrow Foster	Prefer not to answer	89	Colombia	2
4	a.nunc@google.org	DCV88IUZ3SH	Mufutau Andrews Watts	Male	27	United Kingdom	2
5	a.odio.semper@google.couk	LMY33CEG8PX	Remedios Gilbert Patterson	Prefer not to answer	85	Netherlands	1
6	a.odio@icloud.co	RMW345CG1LM	Lenore Bass Garner	Female	90	Canada	2
7	a.purus@protonmail.couk	SRG33MYE8LH	Miranda Lopez Torres	Male	19	Russian Federation	1
8	a@icloud.eu	XGK16LXH5PV	Kerry Fulton Floyd	Male	36	Pakistan	1
9	a@outlook.edu	MNH92RKY6MI	Castor Moses Mckay	Female	62	Pakistan	3
10	ac.arcu@aol.eu	RYS23LVH1WJ	Amy Patton Pacheco	Prefer not to answer	80	Chile	2
11	ac.facilisis.facilisis@gm...	DXY68IMI5MC	Armando Petersen Boone	Male	45	Costa Rica	2
12	ac.facilisis.facilisis@ya...	BQP265JR9DS	Mariam Williams Summers	Male	15	Ukraine	3
13	ac.nulla.in@aol.edu	FIS51PFW50W	Mia Sutton McIntyre	Prefer not to answer	80	Mexico	2
14	ac.nulla.in@protonmail.com	RJX66IXI6MT	Anika Conner Melton	Female	77	Indonesia	2
15	ac.orci@gmail.co	OWT69YKQ1WT	Kylie Price Norman	Female	71	Poland	1
16	ac.sem@hotmail.couk	NQU81PIF3NV	Ali Wiggins Patton	Female	83	Russian Federation	1
17	ac.sem@protonmail.eu	TXX95HUB9GR	Chloe Galleaos Vaughn	Male	60	South Africa	2

Table resultados from database

	resultadosId	pregunta_id	user_id	respuesta	eval
1	1	1	a.feugiat.tellus@icloud.c...	ritmo	1
2	2	2	a.feugiat.tellus@icloud.c...	False	1
3	3	3	a.feugiat.tellus@icloud.c...	melódico	0
4	4	1	a.feugiat.tellus@msn.ca	cordinación	0
5	5	2	a.feugiat.tellus@msn.ca	true	0
6	6	3	a.feugiat.tellus@msn.ca	rítmico	0
7	7	1	a.neque.nullam@hotmail.co	cordinación	0
8	8	2	a.neque.nullam@hotmail.co	true	0
9	9	3	a.neque.nullam@hotmail.co	rítmico	1
10	10	1	a.nunc@google.org	matemáticas	1
11	11	1	a.odio.semper@google.couk	cordinación	0
12	12	2	a.odio.semper@google.couk	true	1
13	13	3	a.odio.semper@google.couk	rítmico	1



Statistics

Statistics

Tableau tools

With statistics we can generate different objectives and strategies based on real data and specific objectives by users

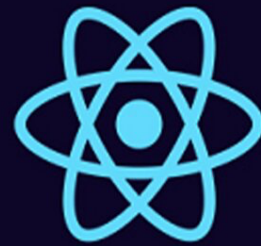


web page

For the web page we used React.js, webPack and Vite, at first we tried to carry out our project with Angular, but certain libraries were not so compatible with our objectives and specifically the communications, that is why we decided to use these frameworks and libraries , on the other hand we decided to use react

and vite for the advantage of open source and excellent performance with the npm and yarn package managers, also the good integration it makes with javascript and modular programming within the code, for connections and linking with our unity project we use built-in libraries in the chosen resources like unity WebGL

React JS

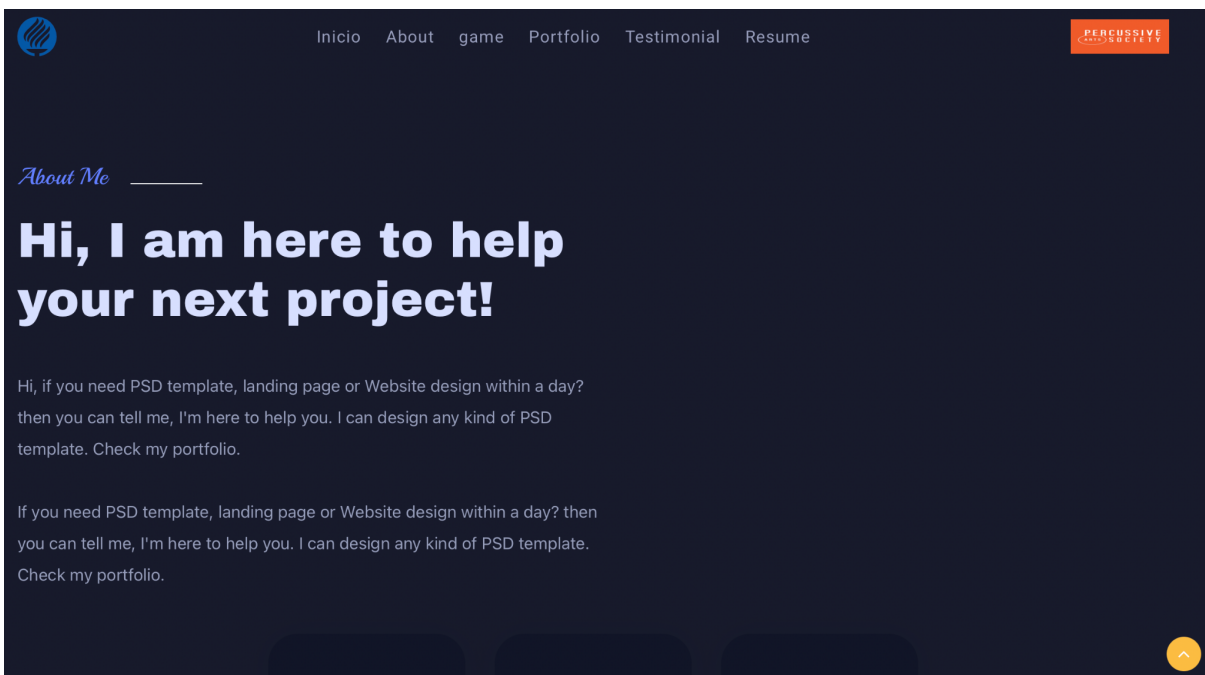
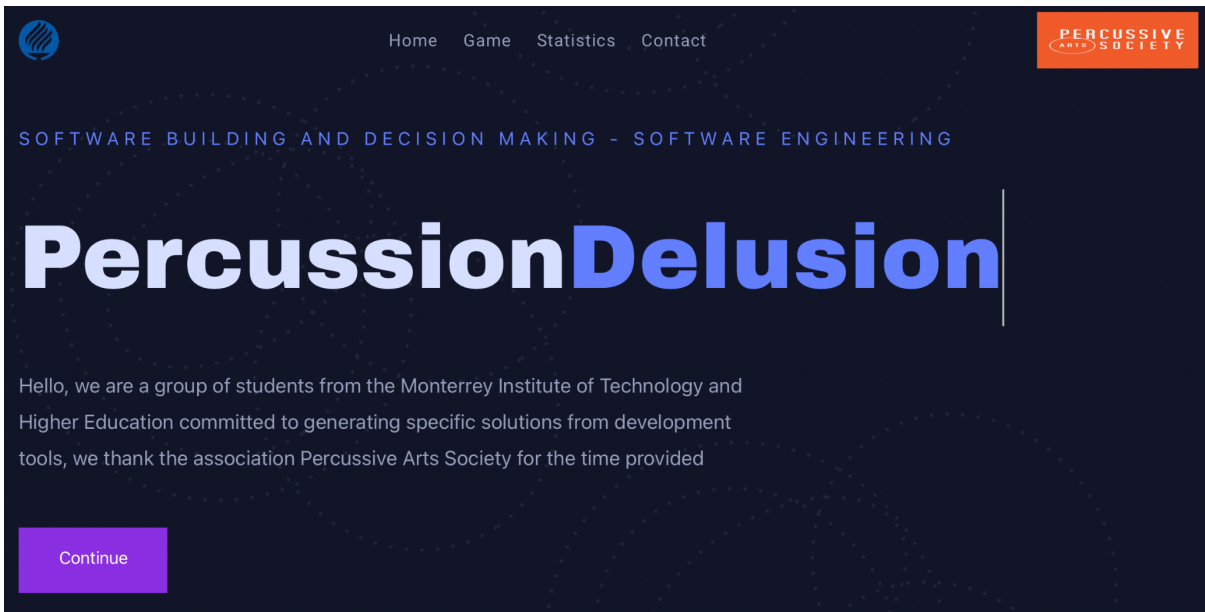


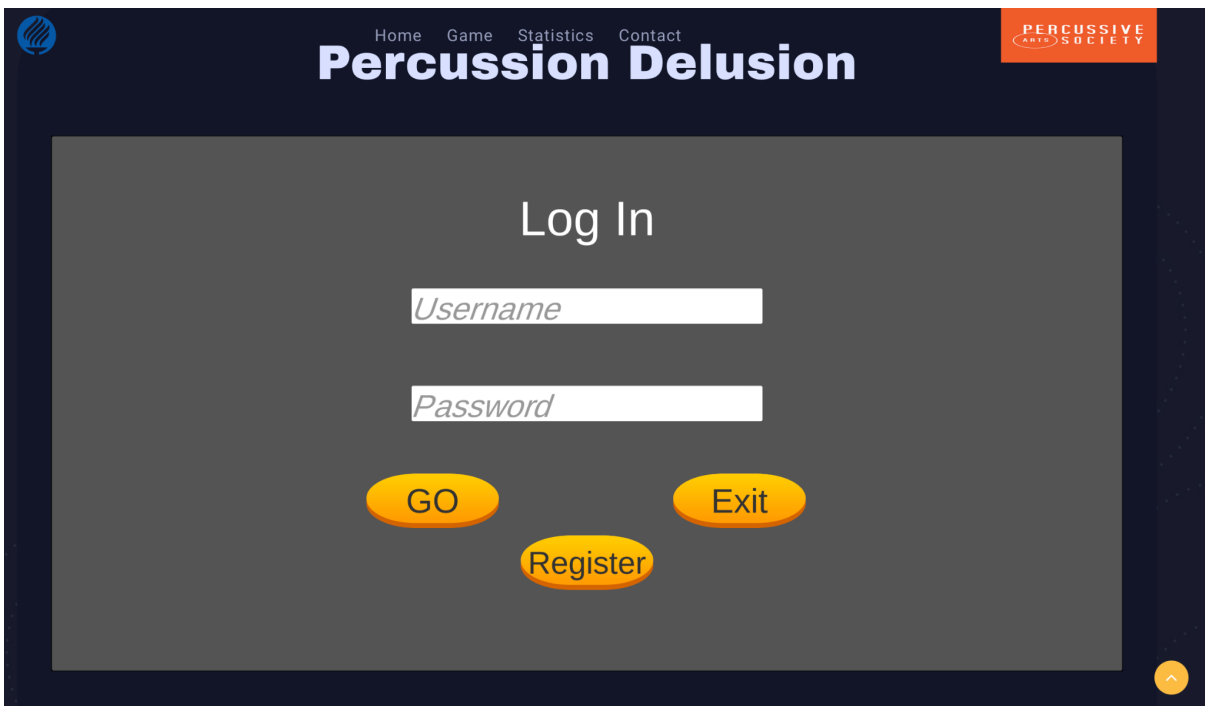
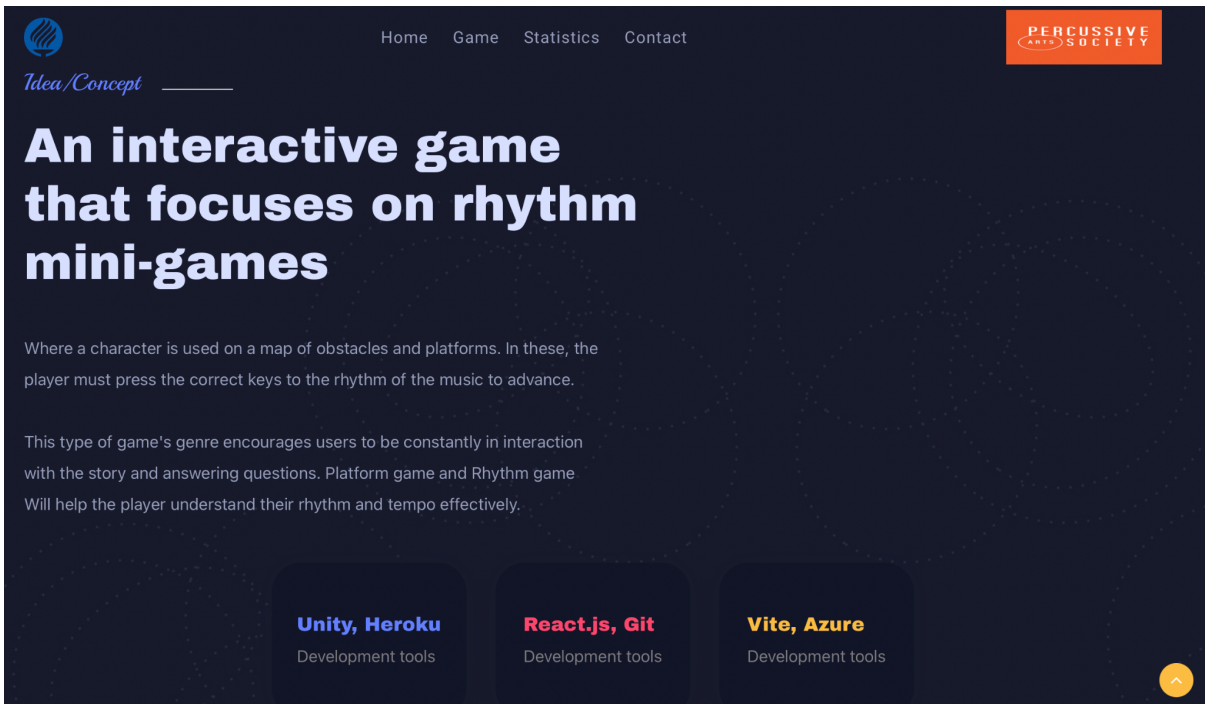
webpack




Vite


Next Generation Frontend Tooling



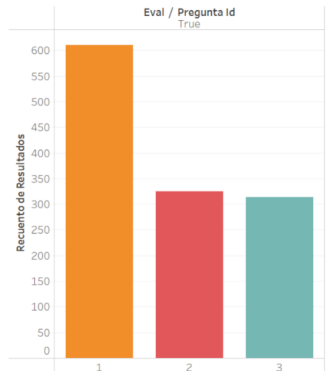




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[Game](#)
[Statistics](#)
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¿Cuántas respuestas correctas tuvo cada pregunta?




Statistics


Statistics

With statistics we can generate different objectives and strategies based on real data and specific objectives by users



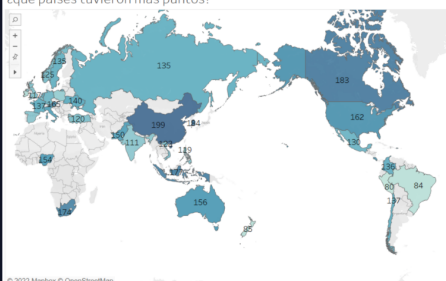


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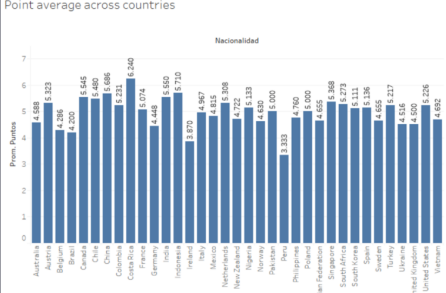
Statistics

¿qué países tuvieron más puntos?



Contact

Point average across countries



Hours of effort

Summary of amount of effort (hours) applied in:

Inception = 12 hours.

Design = 40 hours.

Construction = 60 hours.

Testing = 10 hours.

Release of the system = 15 hours.

Total = 137 hours