House Music

Mapping the 4 to the Floor.

DES 523
David Raxa

Introduction

The Origins

Born from the underground clubs of Chicago and New York, House music has been a part of the music scene for decades. Originating in the 1970s, a small underground club in Chicago, Illinois had various disco DJs who played a certain specific sound. Called the "Warehouse", many club-goers became enchanted by this novel **'boots'n cats'** phenomenon. Thus, the sound of house music had emerged.

The Rise

The sound of House quickly rose as new technology evolutioned. By the mid 80s house music had spread internationally and became one of the most popular genres in the world. Till this day, house music is still a well-known term throughout electronic music - as millions of DJs continue to create variations of this artform.

The Warehouse, Chicago IL

Introduction

What's House?

Boots'n cats, boots'n cats. This is the widely popular phrase that encompasses all house music. This is because all house music carries a distinct percussion throughout its sound, at similar tempos. Usually 118-130bpm, house music carries the same 4 to the floor beats, which keeps the audience continuing to groove without any drastic change.

Example Tempos of House Music

Genre	BPM
House	124.00
Electro House	125.00
Tech House	125.00
Deep House	125.00
House	125.00
Tech House	125.00
Deep House	125.00
Progressive House	126.00
Big Room	126.00
Electro House	126.00
Tech House	126.00
Tech House	126.00
Progressive House	126.00
House	126.00
House	126.00
House	126.00
House	126.00
House	127.85
Electro House	127.94
Electro House	128.00

Introduction

My Premise

Although house music across all subgenres have extremely similar percussion and tempos, that does NOT mean that they are all the same. Many my peers, including myself at points, tend to stereotype the genre as all the same; too similar. **I want to combat that point and show the world this genre's variation.**

When listening to music, usually we'd tend to listen to songs that blend well with our personal mood. Listening to a song at the gym will likely be different than the song I'm listening to during work. Because the scope of house music is so high, this genre has potential to encompass all moods. House music has the potential to change the amount of energy that's built into its song.

With the songs that are showcased, **I will be presenting the amount of personal energy that's being present in each house song.**
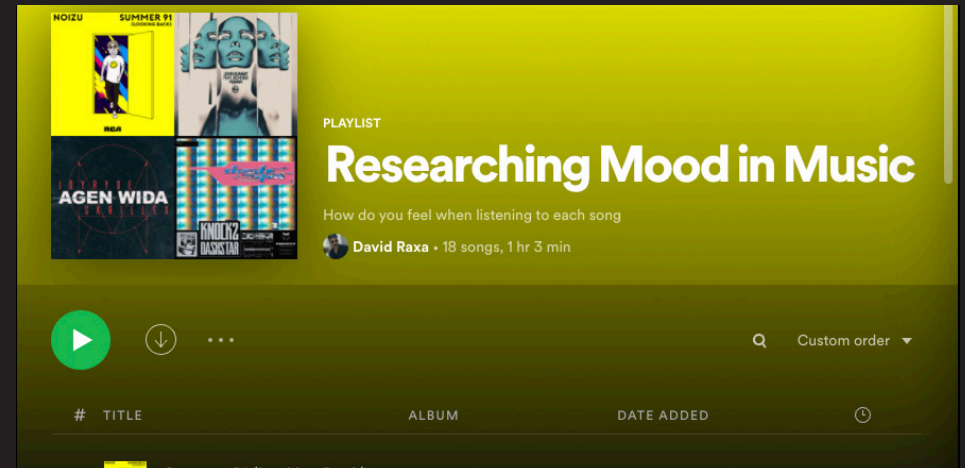
Research

Determining Energy

As a baseline for the composition, I marked my subjective energy level of 17 different songs. Each house song had a distinct and unique subgenre, which helped give variation in the amount of energy present. My energy levels were set as the control group, while the audience determined their own. Energy level was based from 1-100, with 1 being the least energy, and 100 having the most.
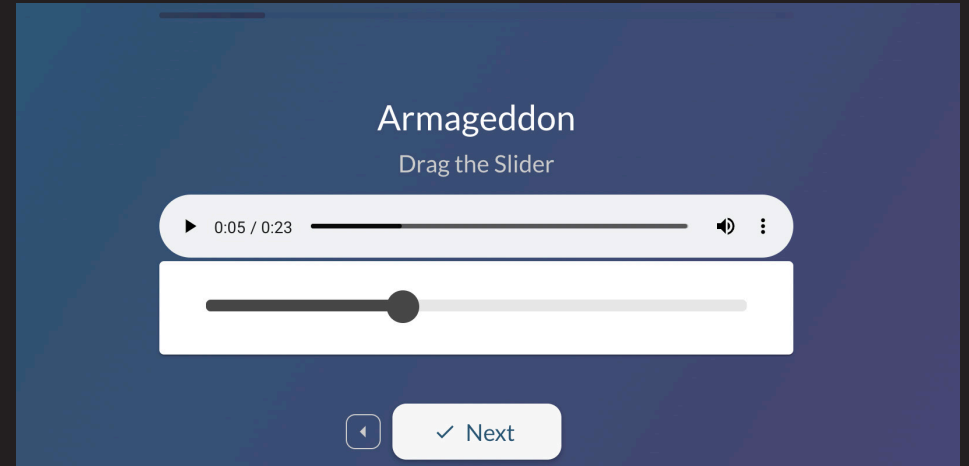

PLAYLIST

Researching Mood in Music

How do you feel when listening to each song

David Raxa · 18 songs, 1 hr 3 min

Track	Feeling	Setting	Energy Levels 0-100	Audience Energy	Artist	Genre	Sub Genre
Summer 91 (Looking Back)	Nostalgic, Feel Good, Peaceful	Drive around town	23		Noizu	House	Piano House
Human (feat Echoes)	Movie, Protagonist, Peaceful	Drive around Town	40		John Summit, Echoes	House	Deep House
AGEN WIDA	Hyped, Working out, Jumping	Car Race	95		Joyryde, Skrillex	House	Bass House
Dash Star	Hyped, Working out, Jumping	Car Race, At Gym	87		Knock2	House	Bass House
Diamonds	Head Nod, Catchy, Dance, Drinks, Chill	Club	50		Sam Blans, Jayson Alanzo	House	Tech House
Do it To it	Head Nod, Catchy, Dance, Drinks, Chill	Club	38		ACRAZE, Cherish	House	Tech House
My Humps	Head Nod, Drinks, Chill	Club	27		Joshwa, Lee Foss	House	Tech-Deep House
Dreamers	Chill, Beach, Feel Good, Peaceful	Drive around Town, Beach	35		Vintage & Morelli, Arielle Mar	House	Progressive House
Wired (With Ella Eyre)	Inspired, Catchy, Chill	Drive around town	44		Sonny Fodera, Ella Eyre	House	Dance-Piano House
Catch My Love	Inspired, Catchy, Chill	In a movie scene, Beach, Club	20		Noizu, Disciples, NOYA	House	Dance-House
Let's Get Together	Hyped, Head Nod	Rave	70		DJ Zinc	House	UK-Bassline House
Gonna Catch You	Inspired, Drinks, Chill	Drive Around Town	49		Pickle	House	Dance- House
Armageddon	Head Nod, Hyped	Rave	65		Dr. Fresch	House	G-House
Pow Pow	Rave, Jumping, Hyped	Rave	87		Marten Horger	House	Bass House
Put Your Hands up for Detroit	Dance, Grimy, Rich Club	90s club	30		Fedde Le Grand	House	Electro-House
ACID	Club, Head nod, Dance	90s Club	20		DJ Pierre	House	Acid House
Fight Night			100		DJ Yukie	House	Speed House

Research

Surveying Audience

Creating this assignment based on personal energy felt subjective in concept. Therefore, it was decided that interviewing and surveying others felt more tangible and personal to the user's senses. In order to get a better idea of my peer's individual energy, a survey was created with phonic.ai and quizzed the individuals with a snippet of each song.

	Track	Summer 91 (Looking Back)	Human	Agen wida	Dash Star	Diamonds	Do it To it	My Humps	Dreamers	Wired	Cat
2	Energy Levels	20	70	20	80	15	10	70	70	50	
3		80	40	30	40	15	65	50	50	50	
4		45	75	40	30	20	80	50	40	40	
5		40	40	30	20	5	50	50	25	60	
6		15	30	56	48	41	14	60	61	67	
7		40	40	30	40	15	31	50	35	50	
8		56	49	100	63	32	65	12	25	79	
9		70	8	100	82	12	81	100	61	50	
10		30	55	69	40	75	88	90	29	64	
11		50	40	75	65	65	100	25	30	70	
12		45	44	45	34	37	100	75	60	55	
13		80	85	50	45	60	100	82	50	80	
14		10		87	29	16	100		7		
15											
16	AVERAGE	44.69	48.00	56.31	47.38	31.38	68.00	59.50	41.77	59.58	
17											

Research

Creating a system

In order to correctly differentiate levels of energy, a color system was implemented. Using the equation

(255*ENERGY)/100,ENERGY*2,255)

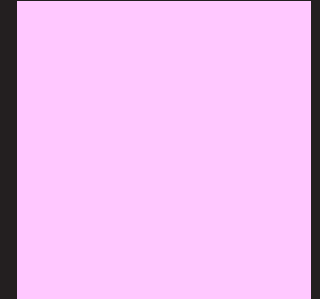This was created to make bright pink energy levels and dark blue energy levels.
**100 percent energy equated to 255-red
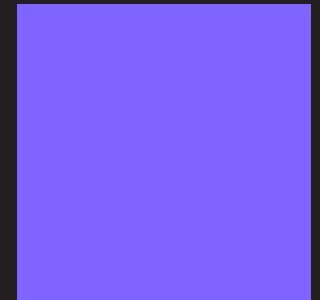ENERGY*2-blue created more differentiation
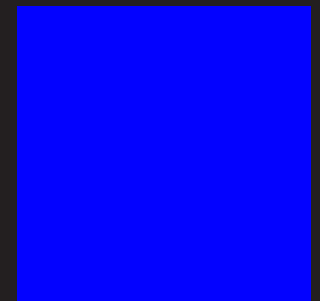255-green added color.**

Highest Energy Color

255, 200,255

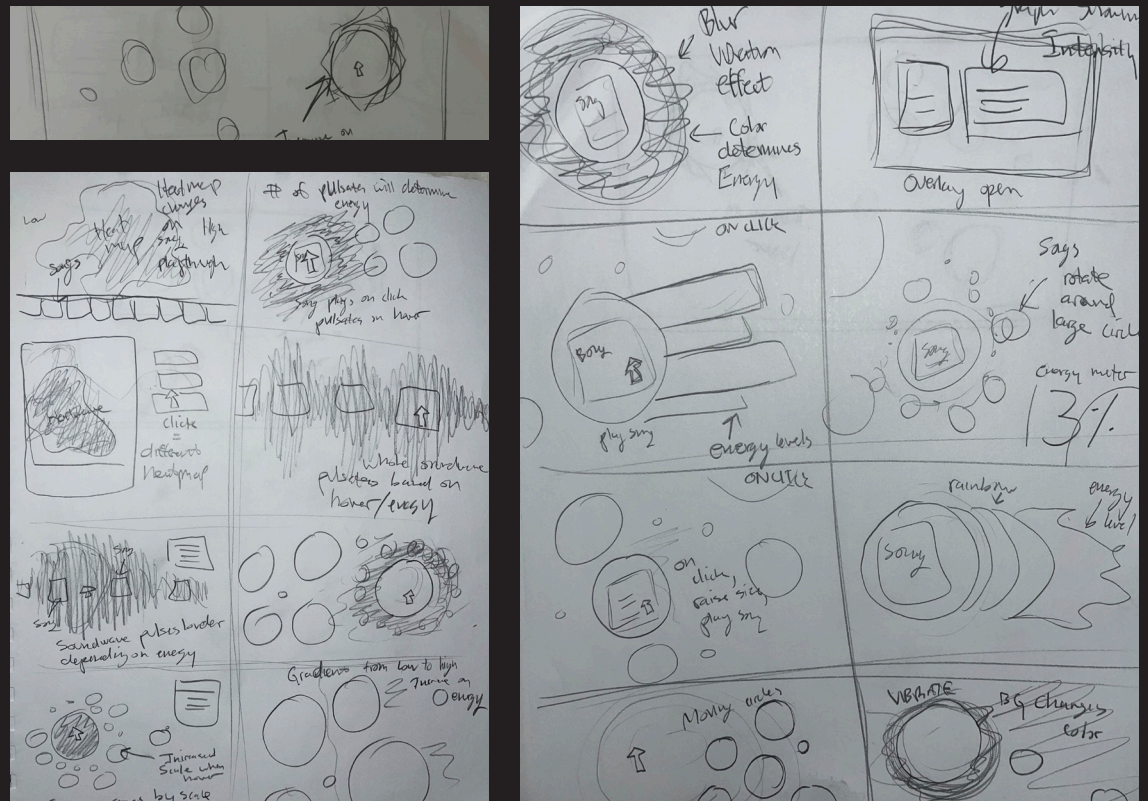**Midpoint Energy Color**

127 ,100 ,255

Lowest Energy Color

3, 2, 255

Ideations

Initial Concept

Because of the composition's theme of music and energy, it was thought to showcase ways to illustrate this concept. Interactivity was of importance in order to illustrate fluid movement and energy.

Keywords

Energy
Movement
Vibrancy
Spark
Change
Moving
Hover
Vibration
Sound
Music
Dancing
Fluid
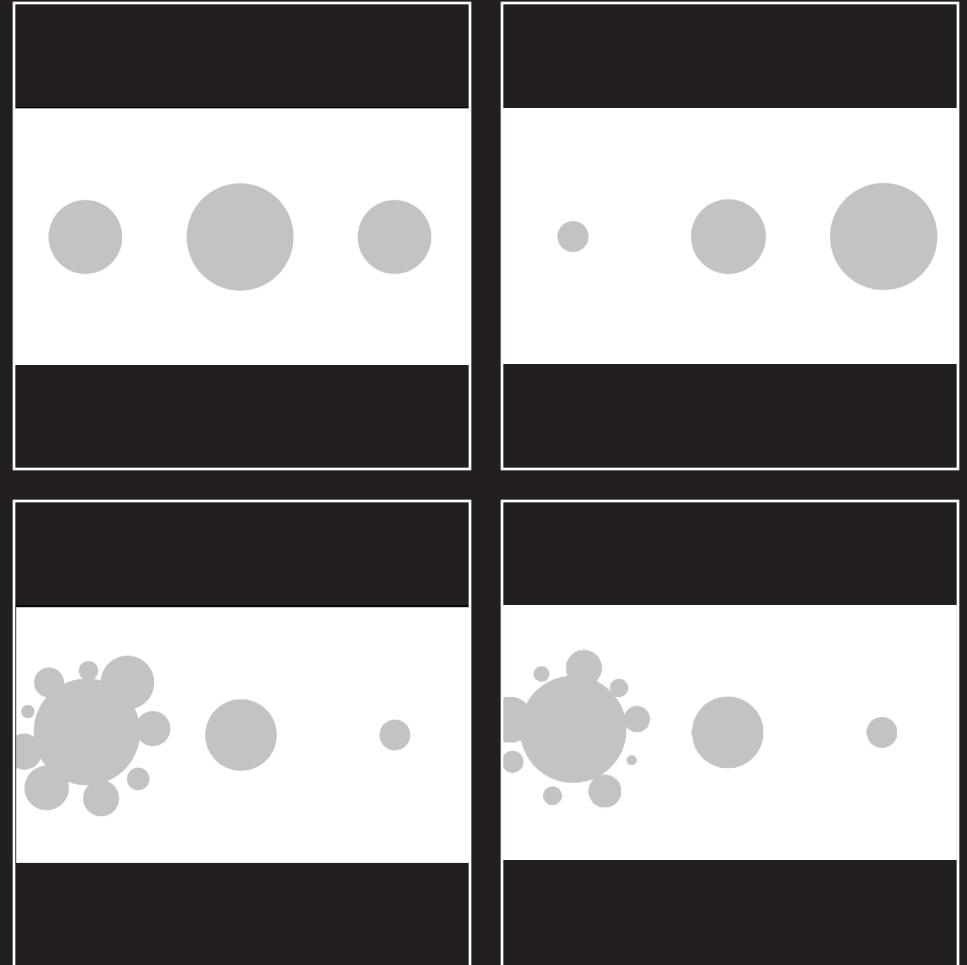Interactivity
Short Spark

Ideations

Creating Movement

In order to showcase the flow of movement, Figma was used to ideate the natural flow of movement. Hovering over the circle will increase in size, while other circles decrease in diameter. This concept imitates selection, and increases interactivity

Link to Figma Prototype:

https://www.figma.com/proto/2KVqZdCdJ7CM4tORojnQtF/Untitled?page-id=0%3A1&node-id=2%3A46&starting-point-node-id=2%3A2
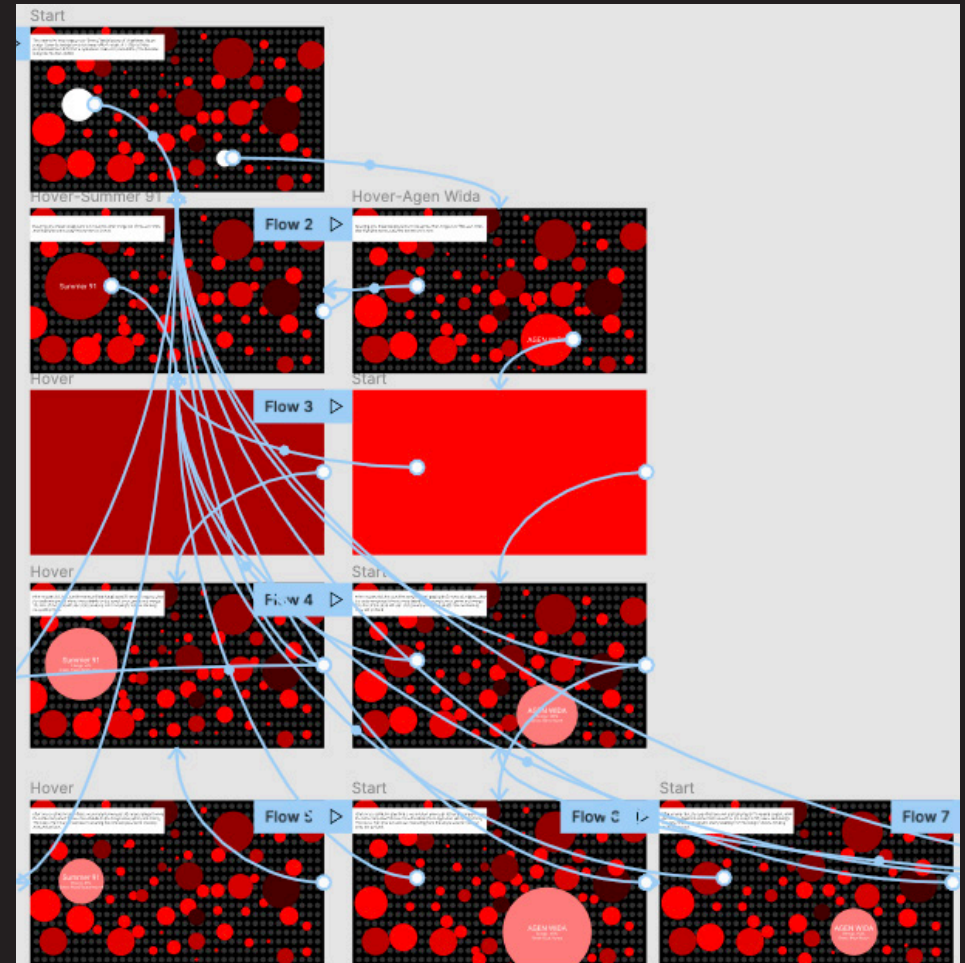
Ideation I

Ideations

Imitating Pulse

Circles are a simple yet powerful tool in mass. Creating pulsations with circle bring the entire composition a heart beat, which imitates the entire notion of energy. The next Figma prototype lead to more ideas to the work's movement concept.

Link to Figma Prototype:

https://www.figma.com/proto/
W1wEC56x0w94Zvf4al6qgW/Energy-Mapping-
Prototype?page-id=0%3A1&node-id=2%3A2&viewp
ort=241%2C48%2C0.34&scaling=contain&starting-
point-node-id=2%3A2

Ideation Flow II

Iterations

Forming the Structure

Functionality was the first step into making the composition. Class and objects were used to differentiate each individual circle with its song and details. The circles were then spawned with a for-loop in order to control the amount of circles that were made. Clicking the circle took the user to another screen before showing more details of the song, inlcuding energy, artist, and a music snippet.

```
class Shape {
  constructor(x,y,d,c) {
    this.x = x;
    this.y = y;
    this.d = d;
    this.c = c;
    this.song = random(sceneArray);
    this.startPoint = this.y;
    this.endPoint = (this.y)*1.1;
    this.startD = this.d;
    this.endD = this.d*4;
    this.collision = false;
    this.transition = false;
  }

  body() {
    fill(this.c);
    circle(this.x,this.y,this.d);
  }

  songCheck() {
    var hit = false;
    hit = collideCircleCircle(mouseX, mouseY, 25, this.x, this.y, this.d);

    //SUMMER91
    if (this.song == "sceneSummer91") {
      let songName = "Summer 91";
      this.c = ('#990000');
      fill("white");
      textAlign(CENTER);
```
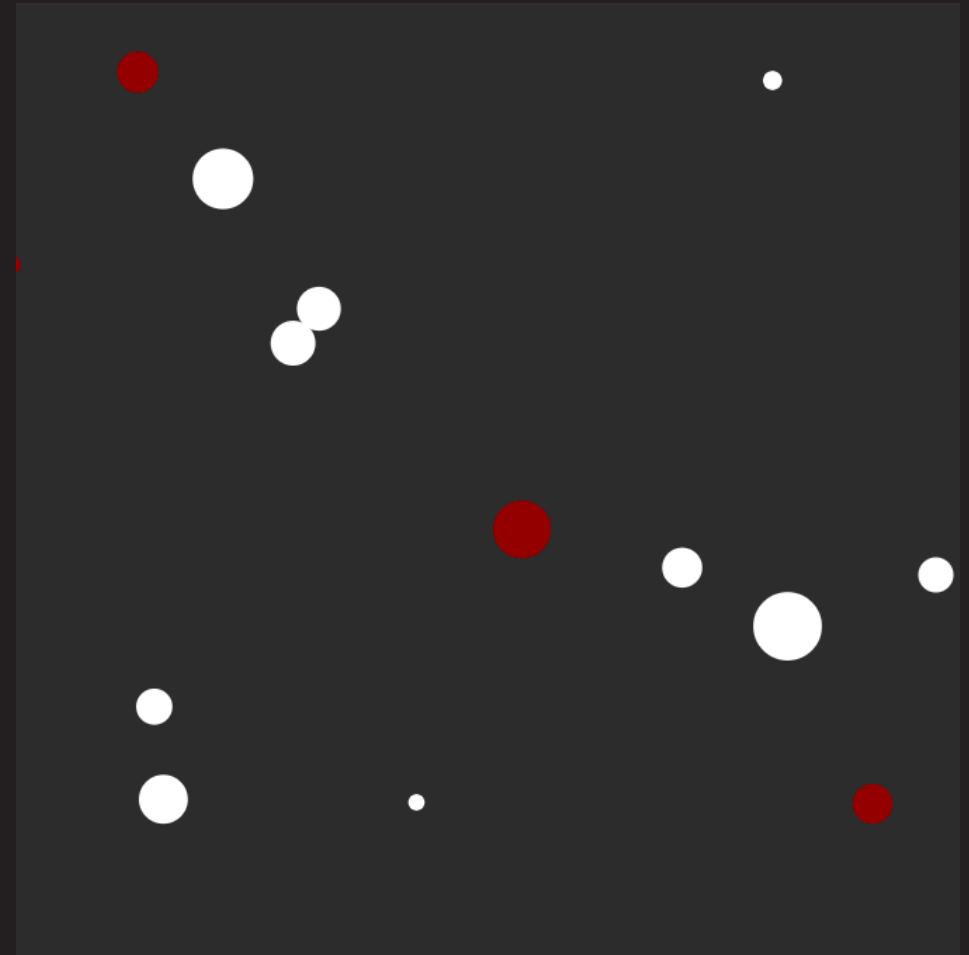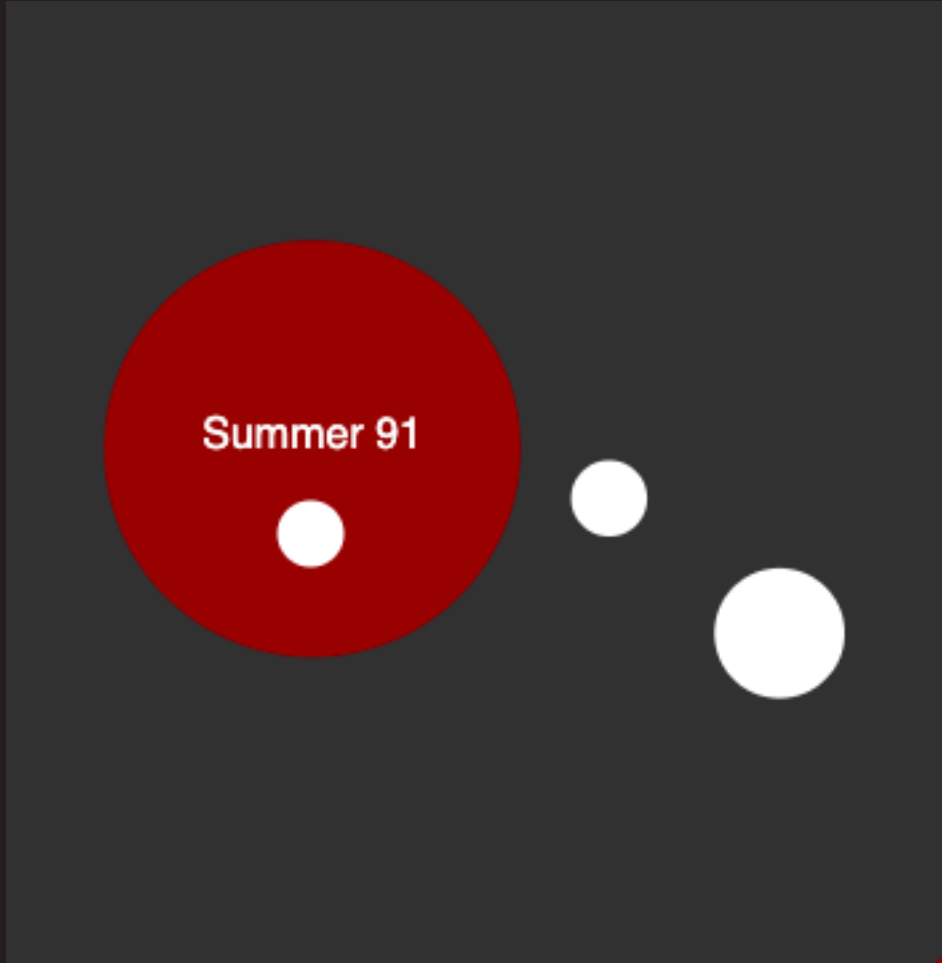
Link to First Draft p5js.sketch

https://editor.p5js.org/raxadavid/full/tDhLP0Qfo
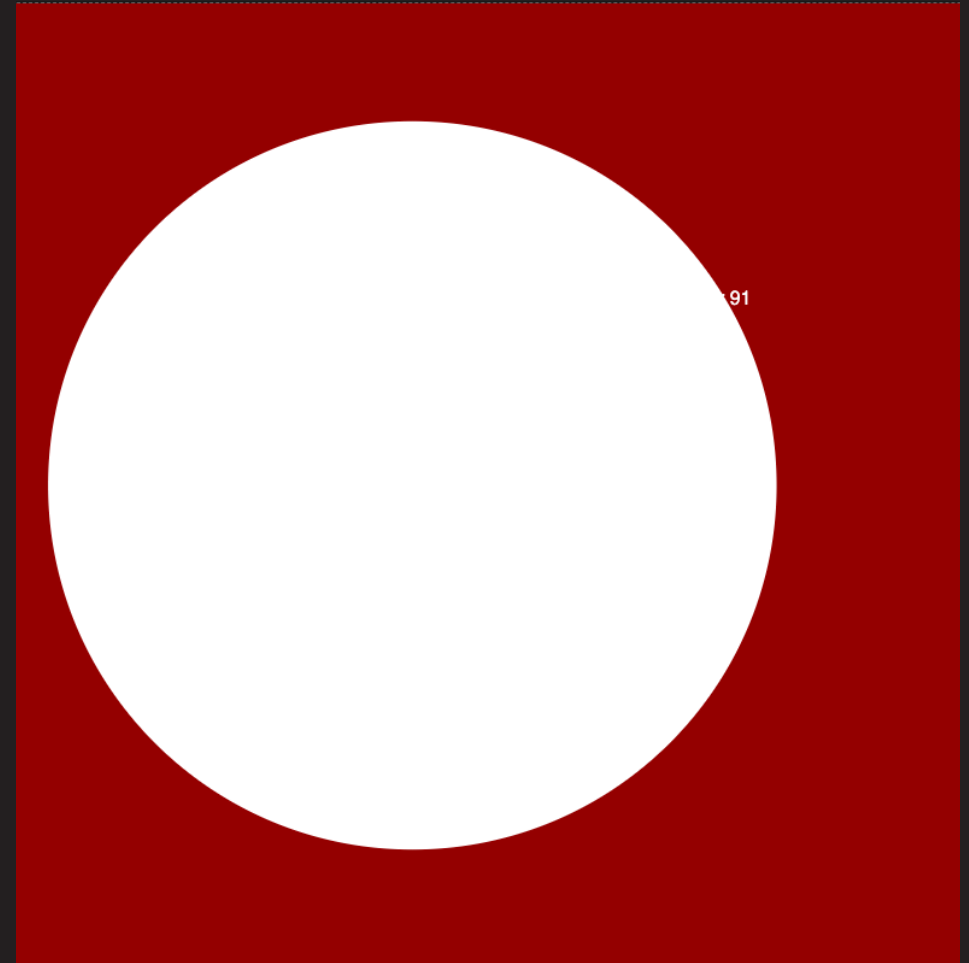
Iterations

Summer 91
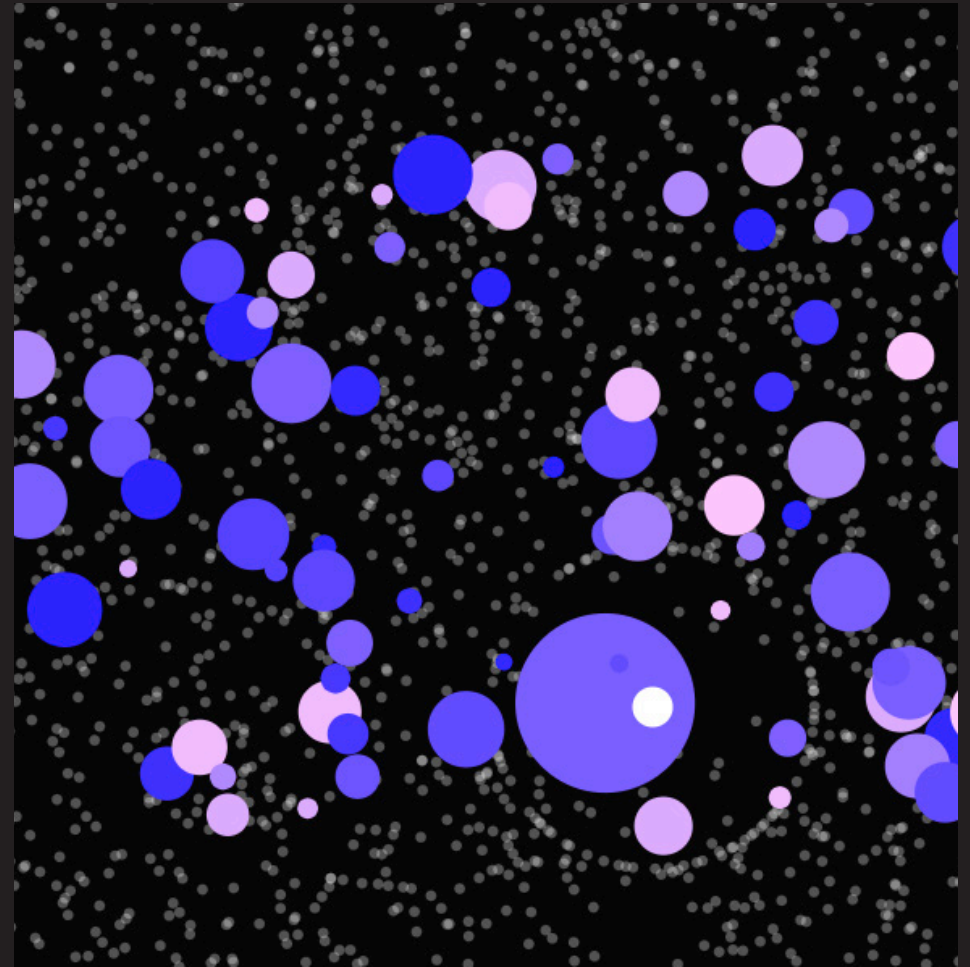
91

Iterations

Building Movement

With the addition of more songs, more interactive aspects were also implemented in the second iteration. More than 1 thousand smaller circles were created as stars, which built onto the spacial, futuristic theme that encompassed House and EDM.. Moving the cursor around also moved the stars away from it, which increased the amount of interactivity with the user.

```
class SmallCircle {
  constructor(x,y,d,c,randomColor) {
    this.x = x;
    this.y = y;
    this.d = d;
    this.c = c;
    this.originalColor = c;
    this.startX = x;
    this.startY = y;
    this.cursorBarrier = 100;
    this.randomColor = randomColor;
  }

  body() {
    var vol = amp.getLevel();
    fill((this.c));
    circle(this.x,this.y,vol*this.d*5);
    if (vol*this.d*5 > 15) {
      this.c = this.randomColor;
    }
    else {
      this.c = this.originalColor;
    }
```

Link to Second Draft p5js.sketch
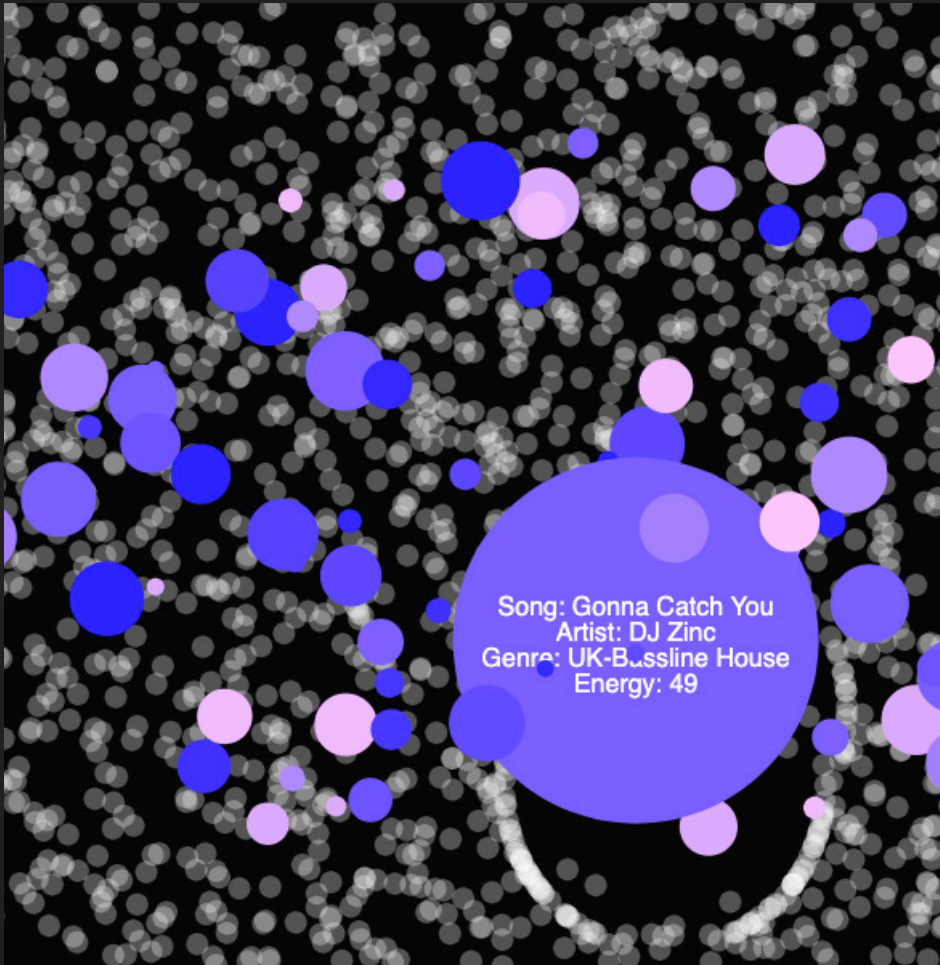
https://editor.p5js.org/raxadavid/full/XYNnQAu0f

DAVID RAXA   **DES 523**

Iterations

Song: Gonna Catch You
Artist: DJ Zinc
Genre: UK-Bassline House
Energy: 49

Song: Gonna Catch You
Artist: DJ Zinc
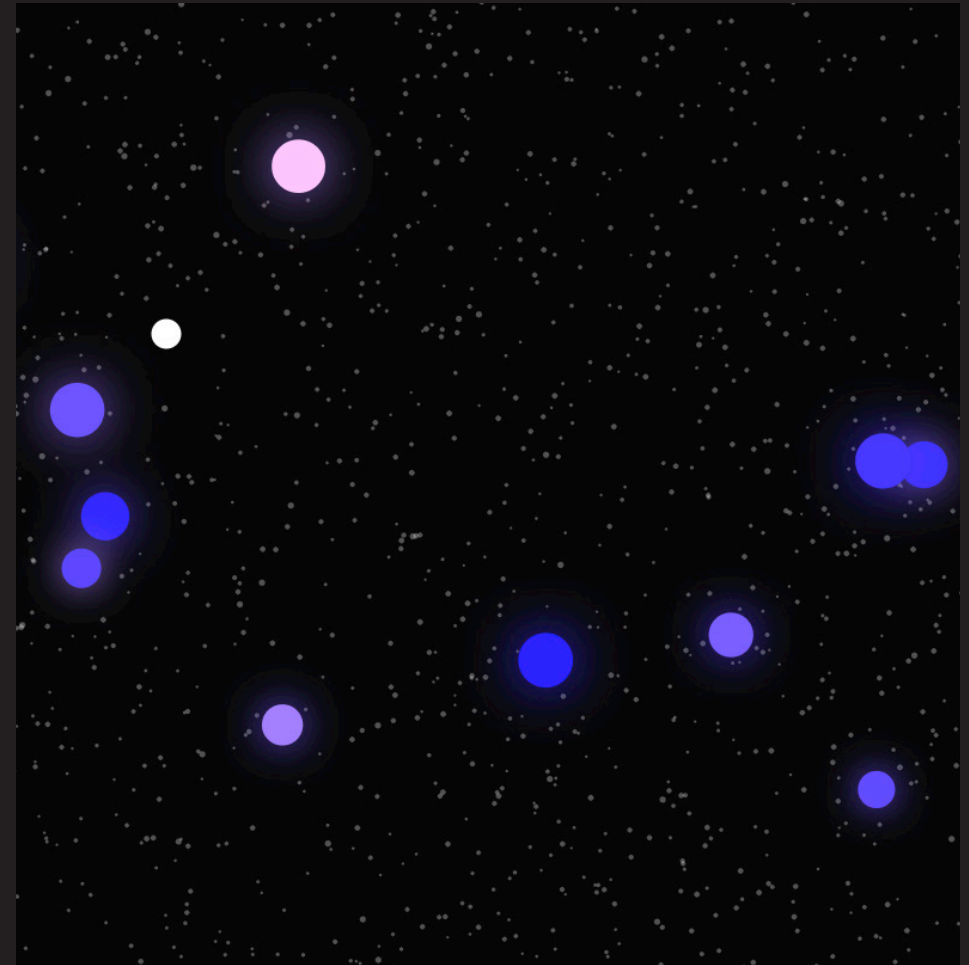Genre: UK-Bassline House
Energy: 49

Final Iteration

Visualizing Data

The repeat of song circles was removed in order to gain more focus on the actual information on the composition. Glow was implemented on the song circles to bring more attention to the element. The audience's score based on the survey was also created as the color of the small circles, which showcased comparison between energies.
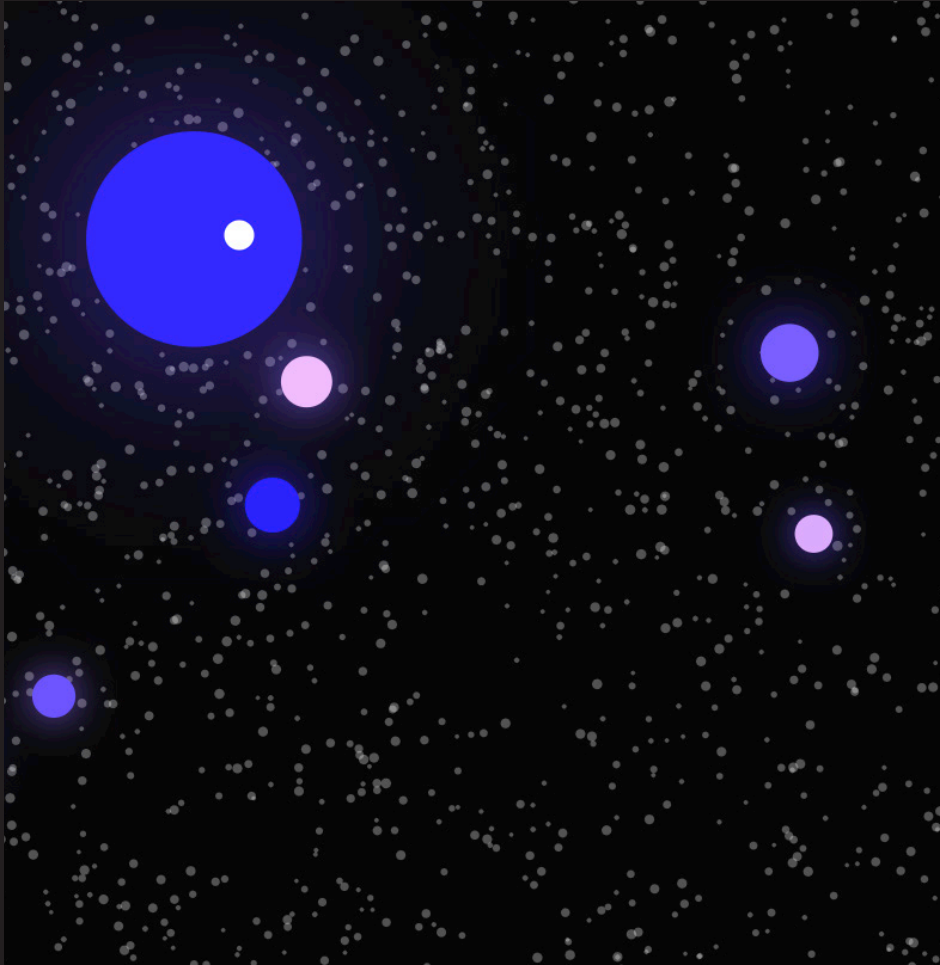
```
if (sceneNum =="sceneCatchMyLove") {
    this.danceColor = [ 15, 10, 20, 20,46,15,30,56,75,60,46,15,37];
}
if (sceneNum =="sceneLetsGetTogether") {
    this.danceColor = [20, 60, 40, 30,52,40,71,53,65,55,70,37];
}
if (sceneNum =="sceneGonnaCatchYou") {
    this.danceColor = [15, 15, 20, 20,63,15,59,60,55,90,35,45,29];
}
if (sceneNum =="sceneArmageddon") {
    this.danceColor = [ 30, 40, 25, 35, 50, 30, 73, 88, 46, 35, 85, 76, 20];
}
if (sceneNum =="scenePowPow") {
    this.danceColor = [25, 50, 20, 25,41,25,75,51,45,80,45,84,33];
}
if (sceneNum =="scenePutYourHandsUpForDetroit") {
    this.danceColor = [15, 15, 60, 20,23,20,11,16,60,70,27,75,36];
}
if (sceneNum =="sceneACID") {
    this.danceColor = [18, 70, 20, 30, 65, 28, 77, 18, 21, 1, 55, 65, 69, 50, 21];
}
if (sceneNum =="sceneFightNight") {
    this.danceColor = [35, 35, 40, 50, 91, 35,100,77,69,90,85,100,60];
}

    if (sceneNum!="main") {
    this.c = color((255*random(this.danceColor))/100,random(this.danceColor)*2,255, 100);
    }
    else {
        this.c = this.originalColor;
    }
```

Link to Final Draft p5js.sketch

https://editor.p5js.org/raxadavid/full/UyaP6-V07

Final Iteration

Hovering over a circle.

Clicking reveals the song and details.

Song: Summer 91
Artist: Noizu
Genre: Dance House
My Energy: 23
Audience Energy: 44.69

Final Iteration

Small circles are compiled of each individual surveyed audience score.

Pressing/Holding spacebar changes to Audience Average Energy.

Song: Fight Night
Artist: DJ Yukie
Genre: Bass House
My Energy: 100
Audience Energy: 66.69

Song: Fight Night
Artist: DJ Yukie
Genre: Bass House
My Energy: 100
Audience Energy: 66.69

Conclusion

Key Takeaways

Creating this project helped understand the scope and work that's put into design and processing. Although designing a visualization may seem simple, it requires the effort of the engineering to make those ideas come to life. Understanding the constraints and limitations to a project will increase understanding from the designer, and also give more opportunity for palpable ideas. Designing and engineering this composition from scratch allowed me to realize the importance of information architecture, organization, and communication when working on a product.

DAVID RAXA

DES 523