



Sophia MeiDi Callesen

scallesen20@gmail.com | 480-390-9932

Education

BACHELOR OF SCIENCE | BACHELOR OF ARTS | BACHELOR OF ARTS |
ARIZONA STATE UNIVERSITY: BARRETT, THE HONORS COLLEGE

- Major: Biological Sciences (Neurobiology, Physiology, and Behavior)
- Major: Theatre (Acting, Design & Production, and Experience & Graphic Design)
- Major: Italian (Intermediate-advanced)
- Honors Thesis: The Arts Initiative for Refugees (A.I.R.)
- GPA (Unweighted) 4.09

BASIC-CODING PROFICIENCY CERTIFICATIONS (SELF-TAUGHT) | CODECADEMY

- Object-Oriented Languages: C++ & Python
- Declarative Programming Language: SQL
- Markup Language: HTML & CSS
- AI: Prompt Engineering

Skills

- Leadership & Self-Starter
- Basic Coding & Programming, Data Entry, and Statistical Analysis Skills (Excel, SQL, Python, C++ with Application in Unreal Engine)
- Specialized Aviation Software Knowledge
- Verbal & Written Communication (Grant Recipient)
- Website Creation (Wix, Webflow, etc.)
- Curriculum Writing & Execution (Educational, Artistic, Athletic)
- Photography & Graphic Design (Photoshop, Illustrator, InDesign, Premiere Pro, After Effects, CapCut)
- Experience Design (Immersive, Interactive, Theatrical, Virtual)
- Lab Experience (Aliquoting, PCH, QPCR, Organizing Samples, Data Reorganization)
- Inventory Control
- Finances (Budget Management)
- Customer Service & Clinical Patient Interaction
- Complex Problem Solving & Multitasking
- Determined, Motivated, and Detail Oriented
- Quick & Adaptable Learner
- Patient & Understanding

Art

Photography

*Graphic
Design*

Coding

Rectilinear

VR

*Immersive
Experiences*

*Unreal
Engine*

*Audio
Engineering*

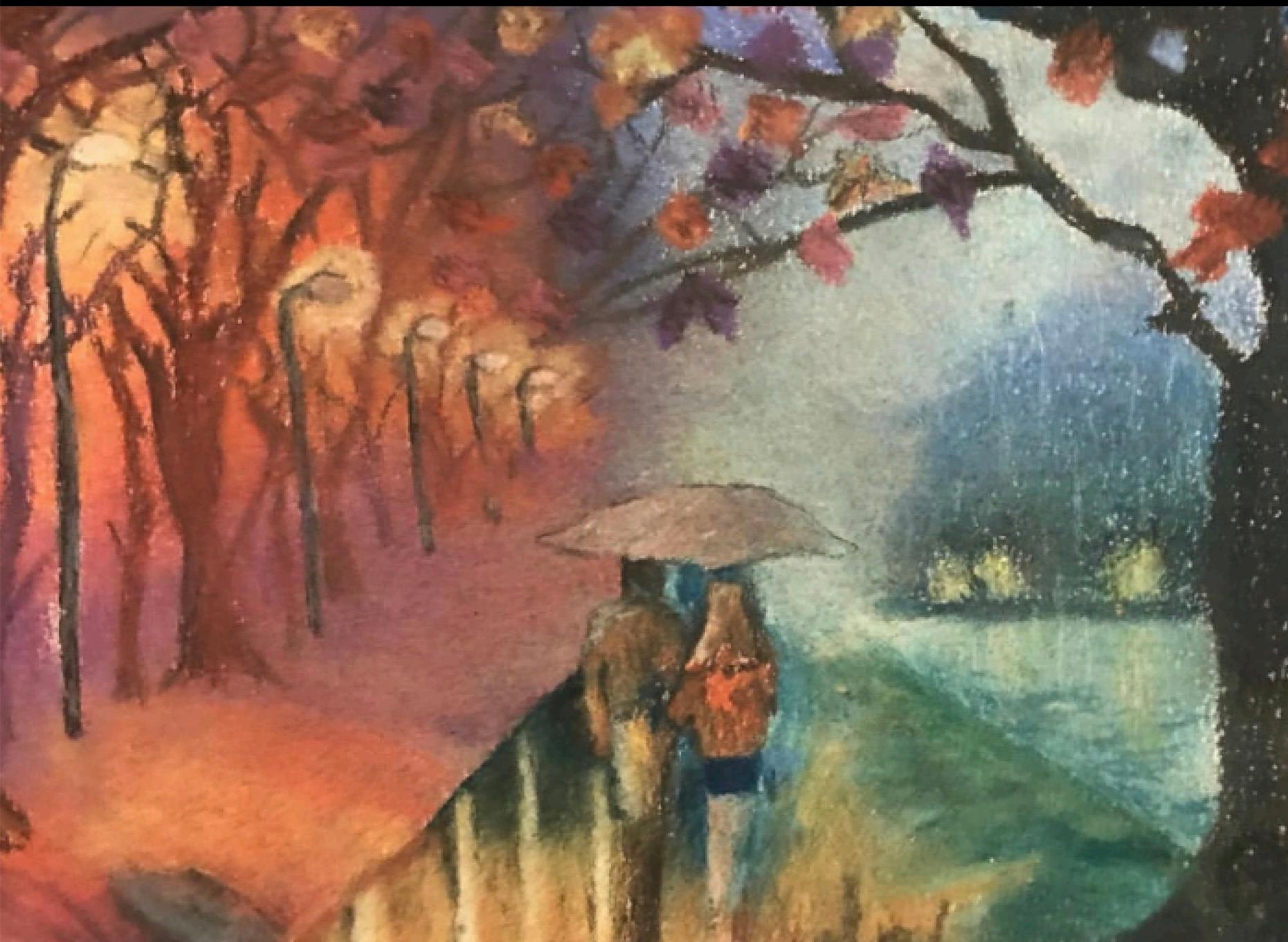
Acting

A.I.R.

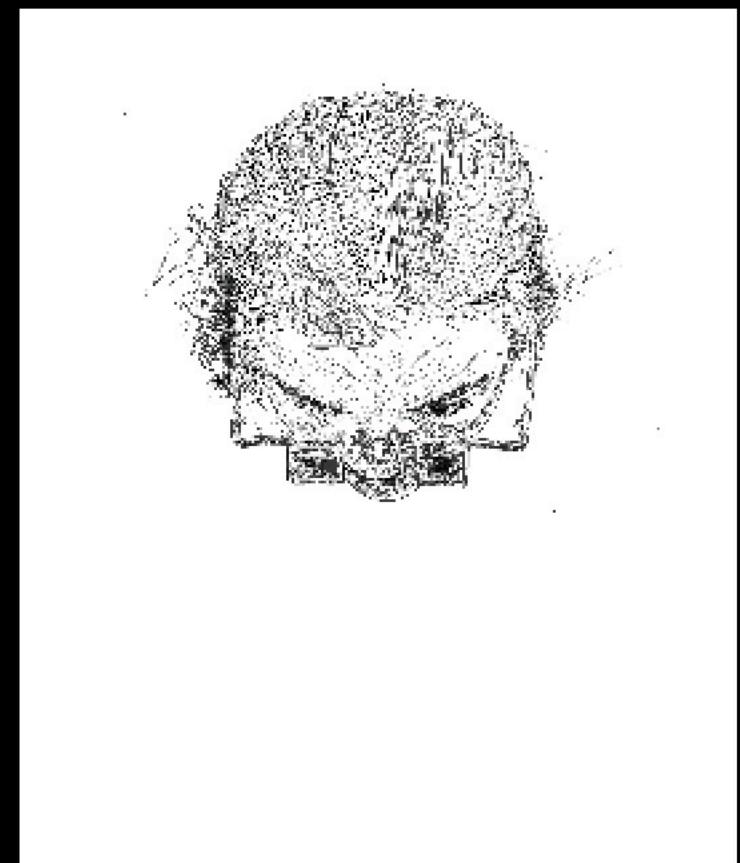
*Jobs &
Awards*

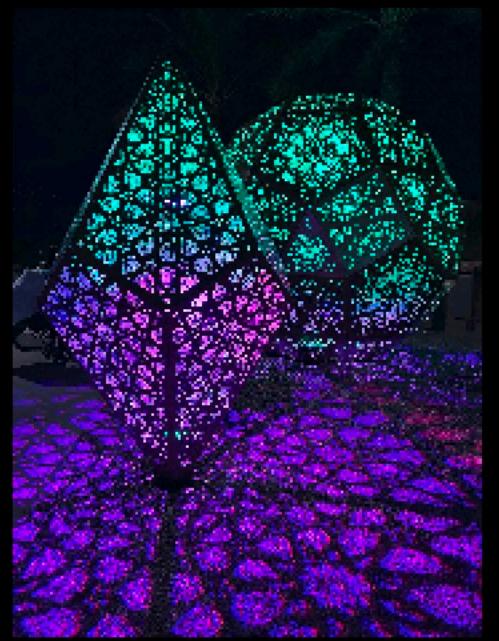
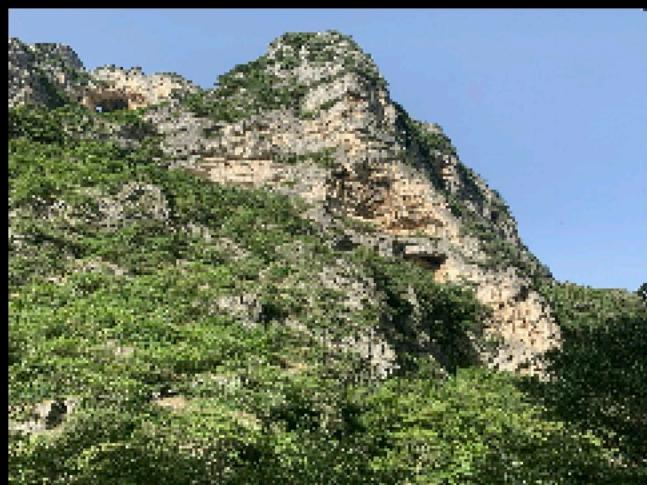


Pastel



Sketches





Websites

A.I.R.

ERSATZ

*Rigging
for
Dummies*

Drawings & Mockups

*Initial
Sketches*

*Final
Products*

Ephemera Designs

*Event
Program*

*News
Article*

Infographic

Editing & Application

*Fun
Edits*

Animation

Feel free to reach out to see more projects!

Initial Sketches



Final Products



Feel free to reach out to see more projects!

Feel free to reach out to
see more projects!

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Event Program



News Article

GOMORRAH
Directed by Matteo Garrone

Sophia Callesen
Gomorrah
Film Description/Plot

Gomorrah is a film that was directed by Matteo Garrone and produced in 2009 by the Faraldo production company. It is a worldwide box office hit with a worldwide box office income estimate of \$55B.

It is loosely based on the novel written by Roberto Saviano, which was also titled Gomorrah. Saviano chose this title as a play on the word Camorra, since it is the subject of both the book and film. The biblical reference to the name was inspired by a speech given by a priest, who the Camorra shot dead.

However, the film differs from the story because Garrone chose to remove Saviano himself from the main叙事 figure position to reduce credibility among audience members and the glorification of organized crime. This helped make a more realistic illustration of the Camorra. Garrone also chose to utilize plain and modernized cinematic style, meaning he did not altogether ignore the setting cliché in the story.

The purpose of the film was to expose the criminal underworld of Naples by focusing on the Camorra, which was a criminal organization similar to the mafia, existing in Campania. The film focuses on the intertwined stories of five individuals: Domenico Totò, Francesco and Roberto, Pasquale, and Marco and Ciro, who all desire to make their own compact with Camorra.

Although not linked to the Cosa Nostra or mafia itself, the operations and goals of the Camorra were similar. Common activities carried out by the Camorra were smuggling, blackmail, coercion, trade, money laundering, waste management, protection, production of fake goods, import trafficking, drug trafficking, and small businesses.

Unlike the Cosa Nostra, the Camorra was broken up into local cliques that would commonly fight against each other. Their goal was also to infiltrate society and politics, creating environments of murder, corruption, and fear at all classes and levels of society.

Characters
Camorra's Criminal Activities
Sophia Callesen
This section highlights "Interview," biography, and the documentation of injection choices and how they exemplify the impacts of Camorra's criminal activities locally and nationally. Pages 2-4

Cinematography
Marco Onorato
Sophia Callesen
This section highlights a short biography about Gomorrah's cinematographer, Marco Onorato. It also focuses on certain cinematographic aspects offering specific scene examples. Pages 5-7

Iconic Scene
Promoting the Storyline
Sophia Callesen
This section highlights an iconic scene in the film Gomorrah. The scene focused on in this section is the final scene in the film, depicting the death of want-to-be gangsters, Marco and Ciro. Pages 8-10

Page 1

Infographic

Kaitlyn Takeno, Neven Morey, Angela Thongphay, Sarah Leung, and Sophia Callesen

CRISPR-CAS9

WHAT IS CRISPR-CAS9?

CRISPR-Cas9 is a gene-editing tool used to easily find and edit specific DNA sequences. A CRISPR is a specialized region of the genome and stands for clusters of regularly interspaced short palindromic repeats. These CRISPRs include nucleotide repeats, that are spaced throughout the region, and spacers comprised of pieces of DNA that are found inside the repeats. In bacteria, these spacers are made up of genomes of viruses that have previously infected the bacteria. When the same virus attacks again, part of the CRISPR is transcribed into crRNA, or CRISPR RNA, consisting of a nucleotide repeat and a spacer (What Is CRISPR?, 2020). This allows the bacteria to remember the virus so that it can better defend itself from the attack. Cas9 is the protein associated with the CRISPRs. The Cas9 protein is an enzyme that works like a pair of "molecular scissors" to cut foreign DNA. It binds to crRNA and trans-activating crRNA, or tracrRNA, and is guided to its target site, where it cuts both strands of DNA. To ensure that Cas9 only cuts at its target, PAMs, or protospacer adjacent motifs, sit next to the target site to signal to the Cas9 where it should cut.

HOW IS IT USED?

The CRISPR-Cas9 mechanism can be used to edit genomes by changing the nucleotide sequence of crRNA to get it to bind with a target made of complementary DNA or by combining crRNA and tracrRNA to create a guide RNA (What Is CRISPR?, 2020). The guide RNA signals to the Cas9 to cut the DNA, then the cell's natural repair mechanisms turn on to repair the DNA using existing DNA as a template. This means that scientists can provide their own DNA sequence that will be ligated with the rest of the DNA, thereby editing the genome.

MEDICAL APPLICATIONS

Researchers around the world have been testing the ability of CRISPR-Cas9 to treat diseases in humans. In 2016, the first in-human clinical trial of CRISPR-Cas9 was carried out in patients with advanced metastatic non-small-cell lung cancer (Lu et al., 2020). Chinese researchers, led by oncologist Dr. You Lu, removed immune cells from the patients' blood and used CRISPR-Cas9 to disable the gene that codes for the protein PD-1 (Cyranski, 2016). Although it keeps T cells from killing other healthy cells, PD-1 also inhibits T cells from killing cancer cells (National Cancer Institute, n.d.). Dr. Lu's group then cultivated the edited cells and injected them back into the patient. Researchers hope that the edited cells will attack the cancer cells in the patients (Cyranski, 2016). Dr. Lu's team reported that the CRISPR-Cas9 edited cells were detectable in peripheral blood after injection, and they concluded that the clinical application of CRISPR-Cas9 in T cells is "generally safe and feasible" (Lu et al., 2020). Since 2016, other clinical trials have launched to test CRISPR-Cas9's ability to treat various diseases, including human immunodeficiency virus (HIV) and sickle cell anemia. However, there has not been enough data collected to determine the efficacy of CRISPR-Cas9 therapies (Ledford, 2020).

AGRICULTURAL APPLICATIONS

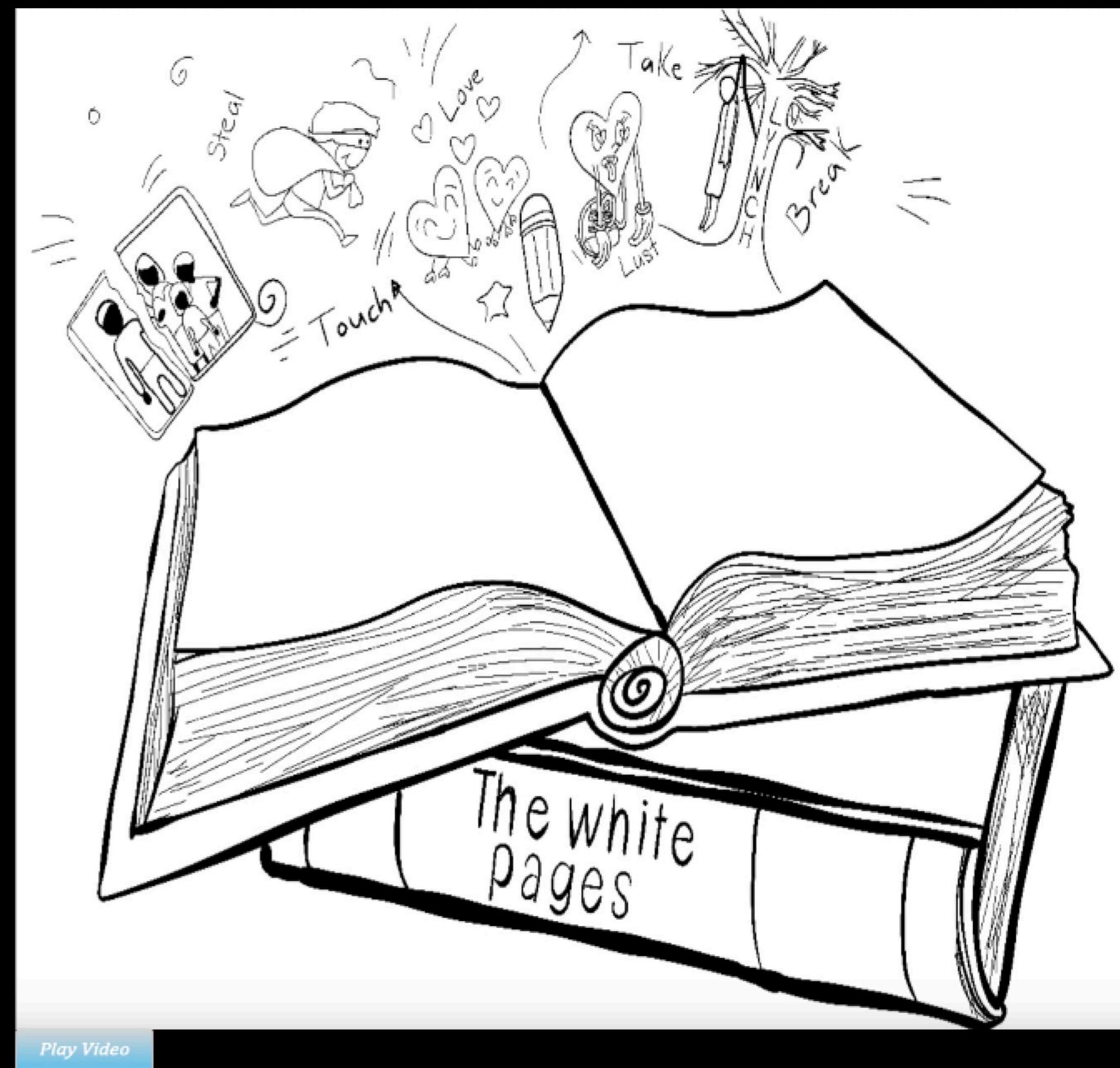
With this application in agriculture, it has become one of the most rapid emerging technologies in bioscience. But, mostly, CRISPR-Cas9 has become a user-friendly tool to develop a non-transgenic genome to edit crop plants to adapt with changing climate and ensure to be approved by food security. CRISPR-Cas9 has developed a sustainable and profound agricultural system in a way of improving yield, abiotic stress tolerance, and pest resistance to

Category	Item	Description
Medical	Gene therapy	Replacing faulty genes with healthy ones to treat genetic diseases.
Medical	CRISPR-based diagnostics	Using CRISPR technology to detect specific genetic mutations or viral infections.
Medical	CRISPR-based treatments	Editing the genome to treat diseases such as cancer or genetic disorders.
Agricultural	Crop improvement	Developing new crop varieties with desired traits using CRISPR technology.
Agricultural	Pest resistance	Engineering crops to be resistant to pests through CRISPR editing.
Agricultural	Abiotic stress tolerance	Engineering crops to withstand environmental stresses like drought or salt.
Industrial	Manufacturing	Using CRISPR technology to produce biologics, pharmaceuticals, and other industrial products.
Environmental	Conservation	Using CRISPR to protect ecosystems and biodiversity.
Environmental	Pollution control	Developing technologies to clean up environmental pollutants using CRISPR.

Fun Edits



Animation



Feel free to reach out to see more projects!

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C++

```
=====
UFO: The Game
=====
Instructions: save your friend from alien abduction
n by guessing the letters in the codeword.

.
|
.-^--.
/_....\
.-^--^--.
(   ooo   ooo   ooo   )
---,-----,---,-----,
/ \     ( Send help! )
/  o \   / -----
/ --|-- \  /
/   |   \
/   / \   \
/   \   \   \
```

Incorrect Guesses:

Codeword:

Please enter your guess:

[Play Video](#)

HTML

An Insider's Guide to NYFW

NYFW can be both amazingly fun & incredibly overwhelming, especially if you've never been. Luckily, I'm here to give you an inside guide and make your first time a pleasurable experience. By taking my tips and tricks, and following your gut, you'll have an unforgettable experience!

Getting Tickets & Finding Shows

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[Play Video](#)

[Play Video](#)

Python

```
{'A': 1, 'B': 3, 'C': 3, 'D': 2, 'E': 1, 'F': 4,
'G': 2, 'H': 4, 'I': 1, 'J': 8, 'K': 5, 'L': 1,
'M': 3, 'N': 4, 'O': 1, 'P': 3, 'Q': 10, 'R': 1,
'S': 1, 'T': 1, 'U': 1, 'V': 4, 'W': 4, 'X': 8,
'Y': 4, 'Z': 10, 'a': 1, 'b': 3, 'c': 3, 'd': 2,
'e': 1, 'f': 4, 'g': 2, 'h': 4, 'i': 1, 'j': 8,
'k': 5, 'l': 1, 'm': 3, 'n': 4, 'o': 1, 'p': 3,
'q': 10, 'r': 1, 's': 1, 't': 1, 'u': 1, 'v': 4,
'w': 4, 'x': 8, 'y': 4, 'z': 10, ' ': 0}
```

15

```
{'player1': 29, 'WordNerd': 32, 'Lexi Con': 31,
'Prof Reader': 31}
```

```
{'player1': 29, 'WordNerd': 32, 'Lexi Con': 31,
'Prof Reader': 31}
```

```
{'player1': ['BLUE', 'TENNIS', 'EXIT', 'CODE'],
'WordNerd': ['EARTH', 'EYES', 'MACHINE'], 'Lexi
Con': ['ERASER', 'BELLY', 'HUSKY'], 'Prof Reader':
['ZAP', 'COMA', 'PERIOD']}
```

```
{'player1': 36, 'WordNerd': 32, 'Lexi Con': 31,
'Prof Reader': 31}
```

Annual Aguilar Family Wine Festival	
Wine Festival Schedule	
TIME	EVENT
12:00 PM	WELCOME RECEPTION
1:00 PM	STORYTELLING & TASTING
2:00 PM	WINE LUNCHEON
3:00 PM	AGUILAR FAMILY WINES
4:00 PM	WINE & CHEESE TASTING

[CONTACT](#) [LOCATION](#) [PRIVACY POLICY](#)

[Play Video](#)

Blog	Media	About
<h3>New York City</h3> <p>New York City is made up of five boroughs which include Queens, Manhattan, Brooklyn, the Bronx, and Staten Island. The city is the home of approximately 8 million people. In 1807, France gifted the City of New York what is known as the Statue of Liberty, which is currently located on Liberty Island and commonly visited by tourists. However, it took 10 years to assemble and therefore wasn't unveiled until 1886. Another famous destination is Times Square. Times Square is commonly known for the big buildings, Broadway shows, and bright neon signs. This famous location was named after The New York Times after the Times moved to that location. Prior to that, it was named Longacre Square. New York City is also known for its bridges that connect the Bronx and Manhattan, & Brooklyn & Bronx.</p>		
<p>Read More</p>		

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Feel free to reach out
for full versions of
media!

Real/Fake



Exquisite Corpse



Auscultation Hallucination

360 Reframe

Feel free to reach out to see more projects!

Abstract

We are fond of noise as a sound, author of the sound can make it sound cool. However we forget that in our own body also a part of that sound. In this project we will explore some sounds in the human movements and identify what it's coming from.



Instructions:

1. Choose a category:
 - a. Annoying Noises
 - b. Bodily Noises
 - c. Motor Functions
 - d. Noises
2. Put on VR headset + headphones
3. Virtually, or with your hands, identify who is creating the noise
4. Don't forget your editor

AUSCULTATION HALLUCINATION

EXPLORE THE NEW WORLD VIRTUAL

ARE YOU READY ?



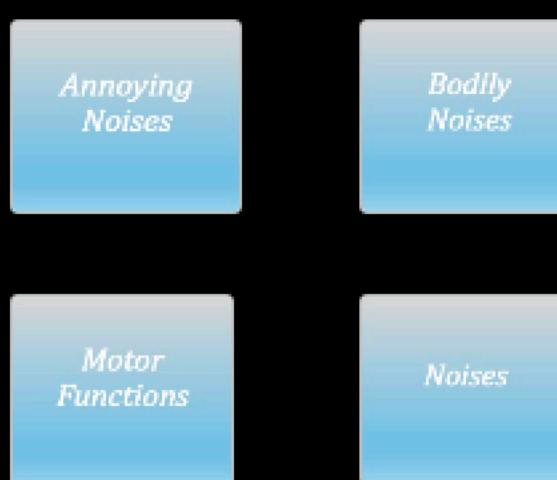
Making Noise, Making Sound

Daniela Villanueva, Lucas Villanueva, Sophie Callahan



Play Video

Videos

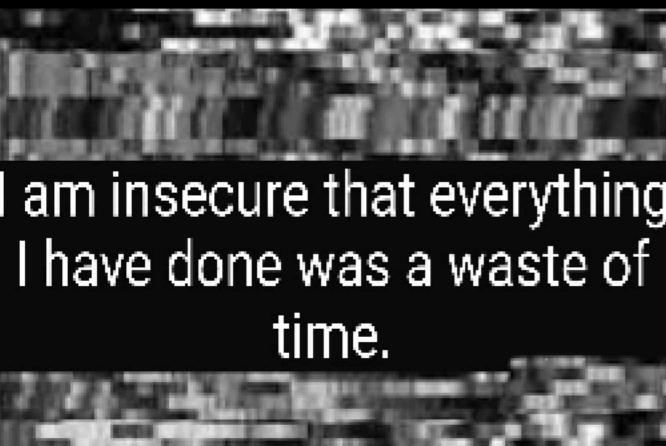


**Target
acquired**



Play Video

ERSATZ

[My Video](#)[My Video](#)[My Video](#)

<https://scallese.wixsite.com/ersatzglitch>

[My Video](#)

Cultural Potluck

Feel free to reach out to see more projects!

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Basic Creations



Games



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Education

BACHELOR OF SCIENCE | BACHELOR OF ARTS | BACHELOR OF ARTS
ARIZONA STATE UNIVERSITY: BARRETT, THE EXODUS COLLEGE

- Major: Biological Sciences (Biology, Biochemistry, and Biostatistics)
- Minor: Spanish (Honor Society & Freshman and Upperclassman Leadership Award)
- Major: Italian (Intermediate-Advanced)
- Minor: Chinese (Chinese Language Proficiency Test - HSK Level 4 and 5)
- GPA: 3.99/4.00

BASIC CODING PROFICIENCY CERTIFICATIONS (SELF TAUGHT) | CODEACADEMY

- Object-Oriented Languages: C++ & Python
- Backend Programming Languages: SQL
- Frontend Languages: HTML & CSS
- AI: TensorFlow, PyTorch, Engineering

Skills

- Leadership & Self-Starter
- Basic Coding & Programming, Data Entry, and Statistical Analysis Skills (Excel, SQL, Python, C++ with Application in Unreal Engine)
- Specialized Aviation Software Knowledge
- Virtual & Web-based Communication (Zoom, Google Hangouts)
- Microsoft Creative (WPS, Microsoft, etc.)
- Curriculum Writing & Execution (Educational, Artistic, Academic)
- Photography & Graphic Design (Photoshop, Illustrator, InDesign, Creative Pro, After Effects, CapCut)
- Event/Space Design (Innervate, Interactive, Theatrical, Virtual)
- Lab Experience (Microscopy, PCR, QPCR, Training Samples, Data Interpretation)
- Inventory Control
- Business (Budget Management)
- Customer Service & Client Patient Interaction
- Complex Problem Solving & Multi-tasking
- Researcher, Researcher, and Retail Oriented
- Block K Associate Learner
- Patient & Understanding

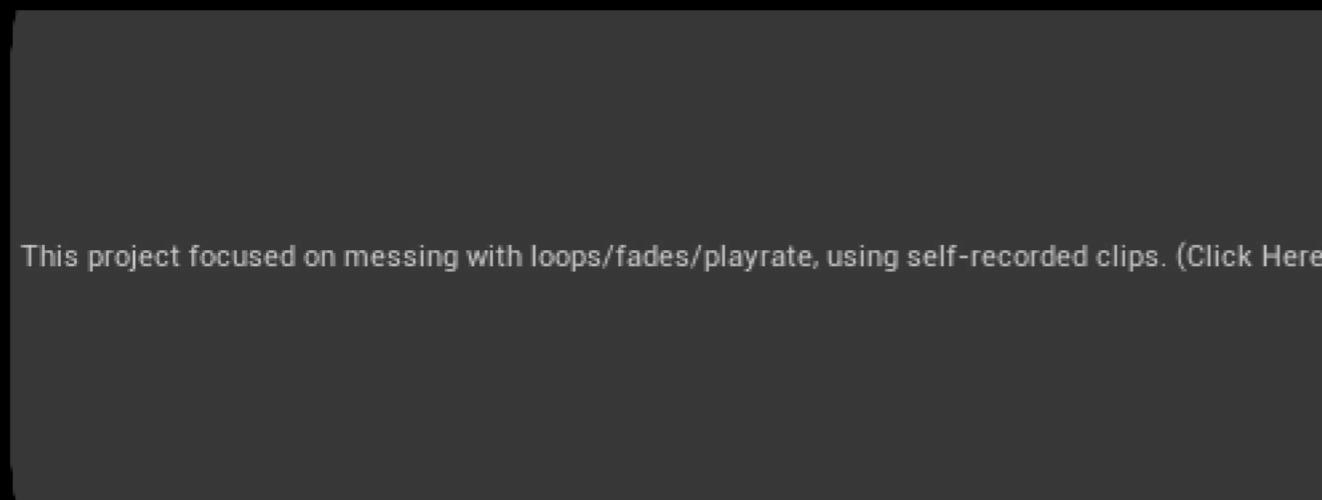


AR Resume

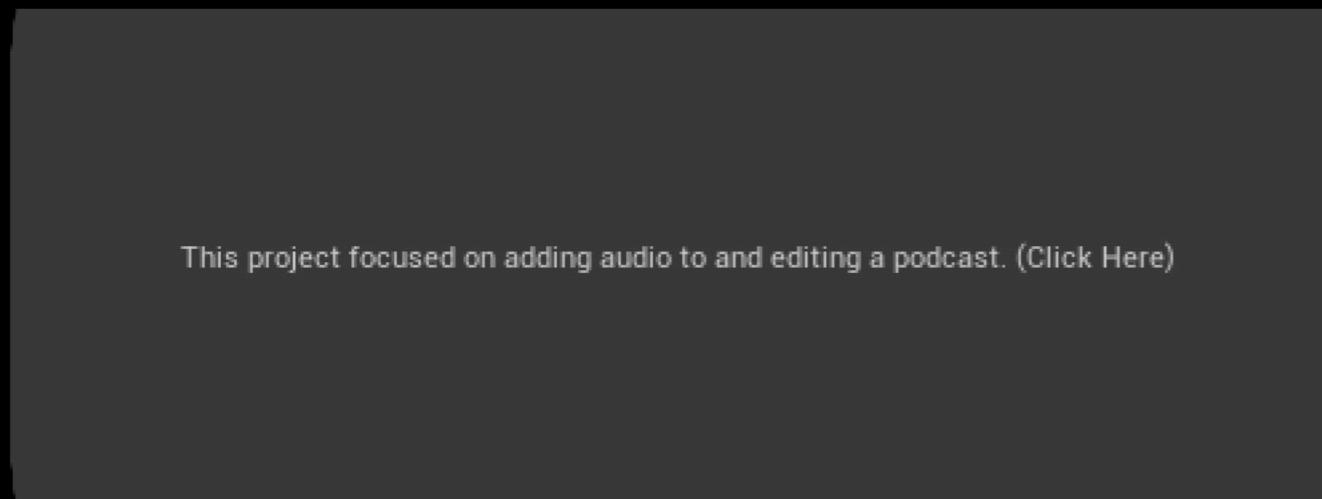
Feel free to reach out
for more samples!

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Loops & Fades



Podcast Edit



Animation Audio

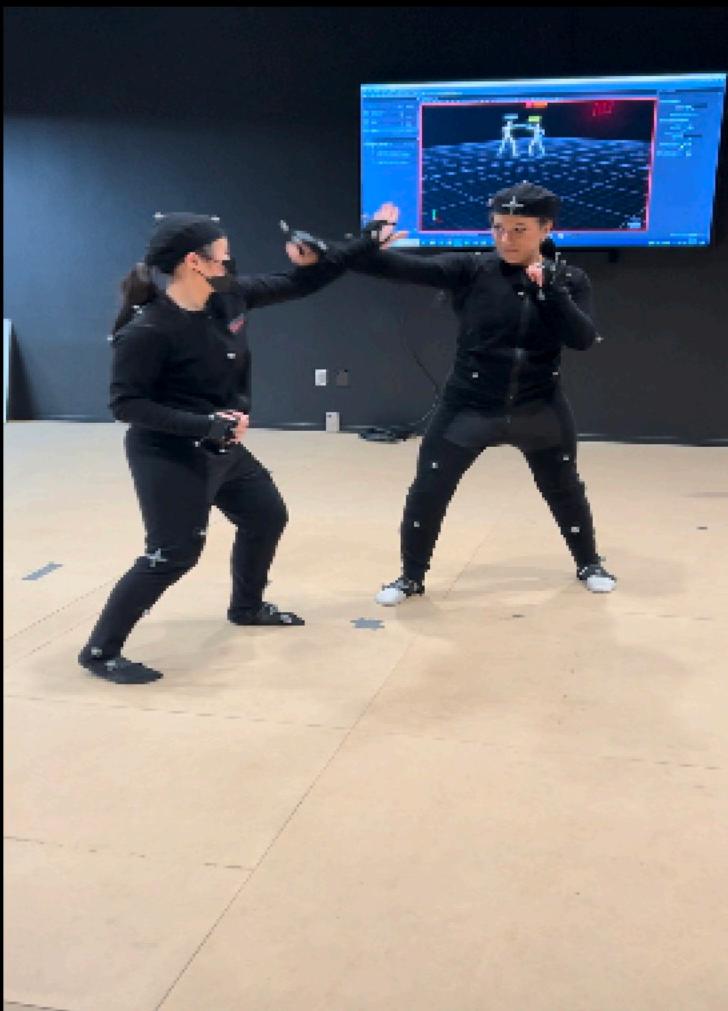


[Play Video](#)

This project focused on adding my own audio to a cartoon clip.

Feel free to reach out
for my official Resume
& Headshots!

[Return](#)





The Arts Initiative for Refugees (A.I.R.)

The Arts Initiative for Refugees (A.I.R.). A.I.R. strives to provide refugee youth with sessions, programs, and opportunities to help them achieve artistic and personal success through teaching and mentorship. This organization offers individualized and group mentoring programs to its students designed for their unique interests in the arts fields of their choice. The goal is for all artists within AIR to play & have fun, be immersed into different arts fields, build a community, create a safe & inclusive environment, and learn more about each other's backgrounds & cultures.

Welcome to a community that demands & creates positive change!
People of all identities and expressions are welcome and heard!
Welcome to The Arts Initiative for Refugees!

<https://scallese.wixsite.com/mysite>



Experience

FOUNDER & DIRECTOR & BRAND DESIGNER | THE ARTS INITIATIVE FOR REFUGEES (A.I.R.)

- Founder, coordinator, and mentor for the non-profit organization
- Created/Designed a website (<https://scallese.wixsite.com/mysite>), built a base coordinating team, and applied for/received a \$3500 grant and a \$2000 grant for funding
- Provides arts opportunities, resources, and events to refugee students, so they can create art in the field of their choice that is genuine to who they are
- Fosters a safe, inclusive environment for forms of free expression

ADULT & YOUTH PROGRAM INSTRUCTOR | BOULDERING PROJECT CLIMBING GYM

- Creates rock climbing curricula for adults and youth (Clubs, Programs, and Private Instruction)
- Creates STEAM curricula for youth
- Trains incoming employees
- Creates and implements inclusive events for minority groups (BIPOC & LGBTQ)

TRIAL COORDINATOR & RESEARCH TECHNICIAN | DR. JAMES ADAMS'S RESEARCH LAB

- Accomplishes clinical procedures for an Autism/Asperger's research lab
- o Makes/ships stool, urine, mitoswab (buccal swab), and blood kits
- o Inventory control
- o Manages, Supervises, and Trains incoming workers on procedures and safety protocols
- o Creates & Updates Standards of Procedures (SOP's)
- o Aids in the reorganization of a database of samples containing 5+ years of sample information
- o Aliquoting PCH, QPCR
- o Upholds HIPAA protocols & SOP's for dealing with sensitive patient information

EXPERIENCE/BRAND DESIGNER & CREATOR | ERSATZ

- o Utilized projection technology, professional recording/sound equipment, and video/audio editing software (Garage Band & REAPER & Adobe Photoshop)
- o Created/Designed a website (<https://scallese.wixsite.com/ersatzglitch>) for the experience
- o Fostered a safe, inclusive environment that promoted the sharing of everyone's insecurities
- o Promoted the creation of a communal mural by participants in the experience
- o Created an interactive participatory space that clashed audience participation with new technology
- o Designed marketing materials for mass production (Signage & All Media)

EXPERIENCE/BRAND DESIGNER & CREATOR | CULTURAL INTERACTIVE POTLUCK

- Utilized 360 camera technology, professional recording/sound equipment and video/audio editing software (Adobe Premiere Pro & REAPER)
- Fostered an inclusive environment that promoted the sharing of everyone's cultures
- Created an interactive participatory space that clashed audience participation with new technology
- Designed marketing materials for mass production (Signage & All Media)

EXPERIENCE/BRAND DESIGNER & CREATOR | AUSCULTATION HALLUCINATION

- Utilized 360 camera technology, professional recording/sound equipment and video/audio editing software (Adobe Premiere Pro & REAPER &)
- Built an inclusive environment that attracted participant interaction
- Created and enforced safe and cleanly VR goggle practices
- Created a video interface that was utilized in virtual reality goggles
- Made an interactive participatory space that clashed audience participation with new technology
- Designed marketing materials for mass production (Posters, Stickers, Presentation Materials)

BARTENDER | HARKINS THEATER

- Knowledge about cocktails, wines, and beers
- Carefully curated and served signature cocktails, wines, and beers

DIRECTOR OF EVENTS | REFUGEE, INTEGRATION, STABILITY, AND EDUCATION (R.I.S.E.)

- Assisted in running the organization
- Created safe and playful, large-scale events during the pandemic for 50+ people
- Planned and organized large scale events for the entire organization (Night of Narratives, picnics, Fundraisers, etc.)

KITCHEN MANAGER | CHIPOTLE MEXICAN GRILL

- Managed/Trained incoming employees on food handling and safety protocols
- Helped prepare and package food for customers
- Positions worked: Grill, Prep, Cash, Line

EXECUTIVE BOARD MEMBER | BARRETT MENTORING PROGRAM

- Helped run the organization and create COVID friendly events for large groups of people
- Facilitated a group of mentors to prep them for sessions with their groups of mentees
- Mentored incoming Barrett, The Honors College students

TEACHING ASSISTANT | ARIZONA STATE UNIVERSITY

- TA for Dr. Phillip Scharf for a course called Drugs, Needles, and People
- Ran discussions about health-related articles and readings by Dr. Atul Gawande
- Graded students' work and projects

INTERNSHIP | BRE'AL PRODUCTS

- Made sales calls to customers and vendors to obtain and give quotes for airplane parts
- Inventory control
- Shipped and received aircraft parts and electronics
- Accomplished data input into a specialized aviation software program (Quantum Control)

Certificates & Awards

- The Arts Initiative for Refugees – AIR
- o Founder & Mentor
- Grant Recipient - Start the Wave
- o \$3500 grant to jumpstart my non-profit organization A.I.R.
- Grant Recipient - Barrett; The Honors College
- o \$2000 grant to fund my Honors Thesis (A.I.R.)
- Moeur Award - Arizona State University
- Phi Beta Kappa Honors Society
- Arizona State University Collegiate Competitive Climbing Team (Rocky Mountain Division)
 - o Regionals: 6th Place & 8th Place
 - o Divisionals Qualifier (x2)
 - o USAC Safesport Certification
 - o USAC Volunteer Membership
- Mayo Clinic Arizona - Premedical Scholars Program
- Preliminary Application Development Program – Barrett; The Honors College
- Dean's Award
- Arizona State University's "New American University Scholar-Presidents Award"
- R.I.S.E. (Refugee, Integration, Stability, and Education)
- o E-board Position - Director of Events & Tutor
- Barrett Mentoring Program
- o E-board Member & Mentor
- National Greek Exam
- o With honors
- o With High Honors
- National Latin Exam
- o Summa Cum Laude (x4)
- o Maxime Cum Laude
- National Charity League
- o Officer Position, Recording Secretary
- o Officer Position, Hours and Awards
- o Officer Position, Publicity