How do we encourage young adults to cultivate creative confidence?

A report by team Avance (Kathryn Teo, Justin Song, Lingshen Luo)

> *"Every child is an artist, the problem is staying an artist when you grow up"*
>
> *– Pablo Picasso*

Introduction

We are Avance – a team of computer science students dedicated to building a platform which encourages young adults to cultivate creative confidence.

But we are not just computer scientists.

We are artists, musicians, dancers, and singers, and so we know how incredibly difficult the path to embracing, growing, and expressing your creative self is. Consider this:

Suppose you are a new artist – you decide to create an oil painting, so you sit down with your brush and palette and begin to draw. You feel the brush in your hand, and you see the colours before you, but you have no idea how to use it.

You start drawing anyway – but it's not long before you realize that what you're drawing is nothing close to what you originally visualized. You realize it will take *years* of work before you'll be able to paint what you want.
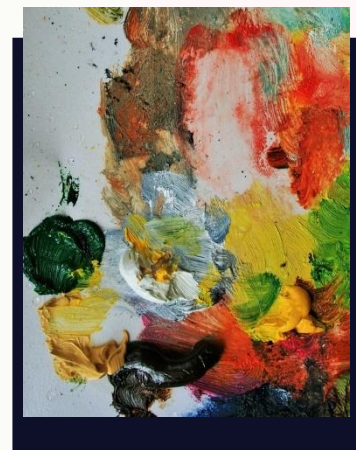
Faced with an unfinished drawing so far removed from your original intention, that is so *ashamedly bad,* it is natural to stop. There is a mountain before you and you're still at base camp. Nobody will have to know, nobody will have to see, if you *just give up*.

But while we at team Avance were fortunate to have mentors and the right learning system set up around us on our journey to becoming fully fledged programmers, many young adults in the world today lack those same critical resources when learning to become artists. Such a support structure is especially vital to art as it is so deeply personal.

We wanted to help others achieve that potential – when we saw this prompt available on the list of IDEO projects, and given our own experience on this journey, we unanimously knew that this was the task we would work on.

Our goal was to re-engineer the learning process; the full, unpolished, experience every artist takes to create art. Each piece of art is a unique story, and we wanted to document it – from the first sketch, to the final polished painting, we would record that adventure.

In all paths of life, it is inevitably to face both success and failure – but what makes the art we create so significant and so vital to our development, is that it is an expression of self.

It is ourselves at our *most vulnerable.*

Our mission was to encourage young adults to look at art, not just as a straight path from start to finish, but the long winding path of dead-ends, mistakes, and setbacks that it is. That is *must be,* for it is this exact journey that makes art what it is.

It is what makes art beautiful.

Background

> *Creativity exists within everyone, but we all have different levels of creative confidence, which is an explanation to why we may think people have different levels of creativity (Kelley, D et al, 2013).*

This background will outline:

1. The value of art to society
2. The lack of engagement with the arts among current youth, and its connection to the confidence they have in their creative ability

To outline the issue that a lack of creative confidence has on society, we must first show the benefits which art provides. With art, we must first start off with its intrinsic value – how it illuminates and enriches our emotional world.

A study conducted over two years in the UK, titled 'Creative Health: The Arts and Health for Wellbeing'[1], concluded that:

- Participative arts activities with children improve their cognitive, social linguistic, and emotional development to enhances school readiness.

  Every $1 spent on early care and education in arts is calculated to save $13 in future costs.

- 79% of people in deprived communities ate more healthily after engaging with arts, 77% engaged in more physical activity, and 82% enjoyed greater wellbeing.

- A social return on investment of between $4 to $11 is calculated for every dollar invested in arts on prescription.

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[1] *Creative Health, a report completed in early 2017 concluded that art was a vital component of society and was greatly undervalued*

Another UK government approved study[2] on the value of arts and culture claimed that:

- Almost 60% of people are more likely to report good health if they've attended a cultural place or event in the last 12 months.

- 78% of children's performance levels in core subjects improved during a programme of daily music activity.

These conclusions provide only a brief overview of the value which the creative arts as a whole provide individuals and society, and the potential which still remains unearthed.

It is an immense concern seeing the decreasing interaction modern day youth have with art in society (caused in part by the lack of emphasis placed on art, but also in part due to the lack of proper nurturing and support we have available to young adults).
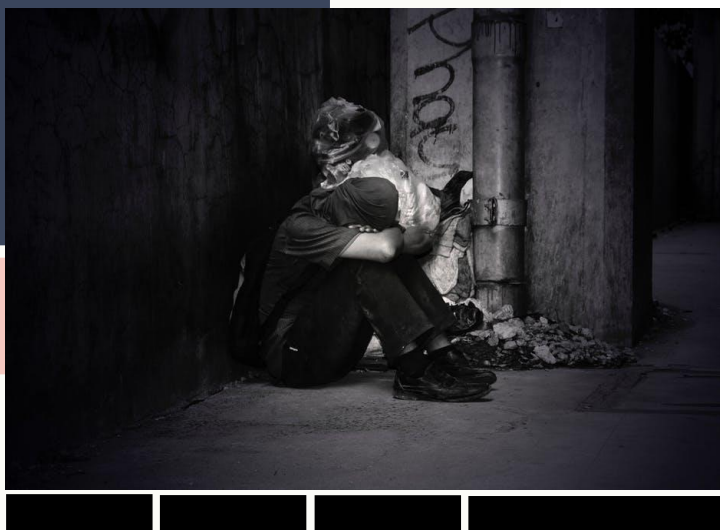
Young adults, who lack confidence in their work and themselves, people, are more open and vulnerable to harsh feedback, and thereby more liable to give up. 'Young people' here can mean a large number of demographics, but for this project, the target demographic will be young adults aged 16-25 who, due to past experience (fear of being judged, fear of being incapable / lacking talent, fear of the first step, fear of losing control), lack the confidence and motivation to try.

This issue is dominant among the age group specified. While 98% of Australians engage with the arts in some way, actual participation in creation (i.e. beyond reading books or listening to music on your phone), remains at approximately 46%[3]. Across the U.S, France, and Japan, only 25% of people believed they were living up to their potential to create[4].

The fact that virtually all members of society interact with the arts, and yet so few utilise their innate creativity to its potential can be traced to one factor – a lack of confidence.

Confidence, as defined by David Kelley, CEO of IDEO (a global innovation company) is:

... believing in your ability to create change in the world around you.[5]

Thus, confidence, while correlated to actual skill, is more dependent on your belief that you can succeed, which will naturally allow you to overcome the challenges before you.

As the creation process comes from within, if you lack confidence from the start, you will naturally interpret any mistake as an insurmountable block and are destined to fail.

[2] *the Value of Arts and Culture, 2017, a UK government sponsored research report on the ways in which arts can impact everyday citizens*

[3] *Connecting Australia, a report completed by the Conversation to describe the role arts had in the everyday Australian's life*

[4] *Adobe Data, 2012, a look by Adobe Data about how Creativity is perceived and valued around the world*

[5] *Creative Confidence, 2018, an online free book by David Kelley describing what creative confidence is*

With an education system which tell students who they ought to be, what they ought to do, it is understandable that young adults struggle when they are asked to do something new. We shun 'wrong' ideas and encourage our young to do things the 'right' way.

In this environment, how can we encourage young adults to cultivate their creative confidence and utilise their inner capacity for art?

Design Process

To answer this question, we designed over 10 different products which we believed could help to solve the issue. We wanted to keep our application precise and focused. Our criteria for the final solution was that it had to be simple, thoughtful, and effective.

We eventually narrowed down our solutions to a possible three:

1. A brainstorming solution application which allowed users to anonymously build and create their own projects before merging it into one
2. A project scheduler which users use to build a schedule for developing a project.
3. A project timeline builder which users add to while creating their project. This will encourage them to keep track of the project they're building, and to feel that they are making progress.

With our three main solutions in place, we then proceeded to interview candidates which fit our target demographic. We had two primary goals during this interview process:

1. Confirm whether our research and findings were accurate
2. Discover which of our proposed solutions would best solve the problem, and see whether there are any other solutions a candidate might propose (which we hadn't)

We interviewed 6 candidates between the ages of 18 and 25, from all disciplines with different backgrounds. Half of them considered themselves artists, the other half did not.

Towards those who actively drew, painted, or interacted with art in some way, we wanted to understand an experience that they knew intimately, and how we could add to it to make it more useful and/or enjoyable.

Towards those who considered themselves 'not creative', we had the goal of trying to understand why they never picked up the arts, and what it would take for them to more actively engage in them.

What we discovered was that there were two major trains of thoughts towards what people believed about the nature of creativity. On one hand, those who were deeply involved with the arts considered creativity as an expression of self. This was closely aligned to David Kelley's definition above –

creativity is within all of us as it is just a part of who we are. On the other hand, those who hesitated to create their own art believed that whether or not something was creative was dependant on what others thought about it. The value of what they created had to conform to other peoples' beliefs.

While one mindset would empower people to see the creation of art as a journey of discovery and understanding, the other mindset would restrict people – they would not make something that was truly personal unless it received a stamp of approval.

We realized that this was the core of the issue. At its heart, the problem lied with a complete misunderstanding towards what it meant to be creative – it is not that what you made had to be 'innovative' in the way framed by startups and large corporations (where an idea had to have a statistical, tangible, or lucrative benefit to be valuable), but that being creative was a way for you to convey who you were, and what you believed in.

With this information, we concluded that the third option would be the most effective at encouraging a mindset of growth and open expression. A timeline would naturally track the growth and the transition art went through to reach its final edition. This approach would even help us track the growth of the artists themselves.

Our interviewees thought so as well, with 5 of the 6 believing that a timeline would be the most defensible and intuitive solution.

Instead of seeing only the surface of other art pieces, this would allow any viewer to have a more profound understanding of how it came to fruition. This would help:

- Remove unrealistic expectations which could damage self-esteem
- Encourage users to keep trying as they would understand that no artist's progress is smooth and untroubled
- Track their development and improvement with each and every milestone

With the basic outline confirmed, we needed to build out the rest of our website to fulfil our overall vision. Our first step was to use Marvel, an application which could be used to build basic examples of how a website would transition between pages (and to mimic the overall use and feel of the final rendition of the tool). This wireframe helped illustrate how our application looked so we were on the same page and could start building the real app.
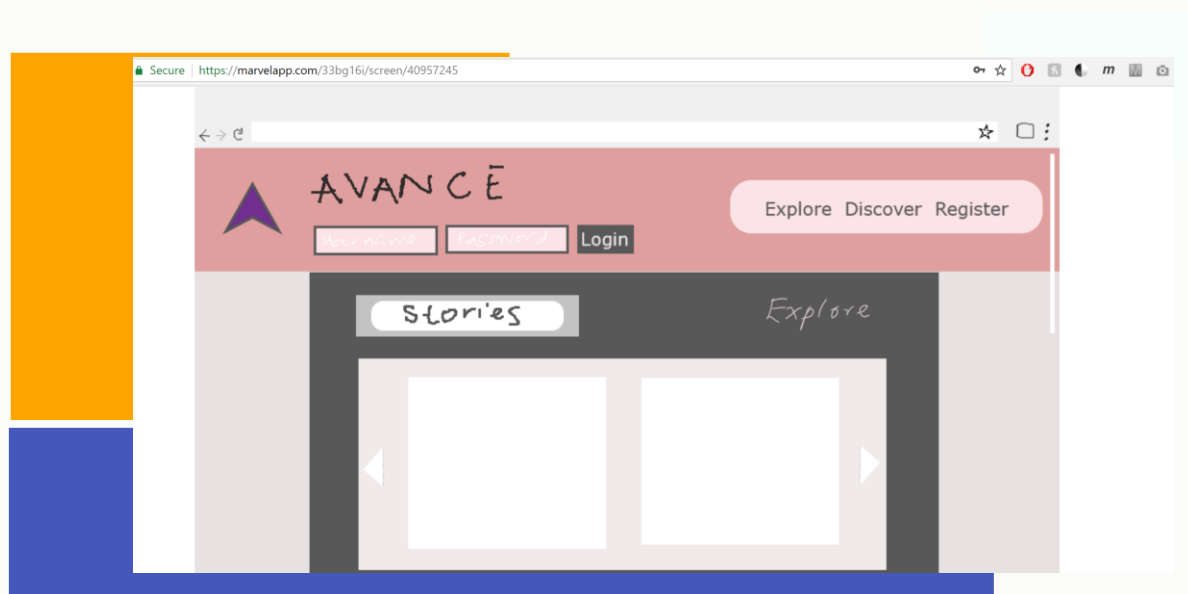
The working model would begin with a landing page which included a list of featured projects. From this page, viewers would be able to peruse the best stories we had to show.

Users could also login where they would see their personalized dashboard, which would include a list of their projects.

The main area of contention we faced as a team was how to incorporate the social aspect of our application. Our tutor, Niels van Berkel explained that to create an environment to effectively nurture immature, growing, artists, we needed to build a community which would support and provide emotional and professional assistance to our young artists.

We decided on three features:

- A comment section for the members to comment on other artworks
- A forum for members to request mentoring and feedback on their progress
- A search function for users to easily explore and see other projects to use as inspiration for their own projects.

Unfortunately, due to the number of tasks and unforeseen circumstances within the team, we had to scrap the forum that we were going to implement. We have a draft copy of the EJS view of the forum, but it currently has zero functionality.
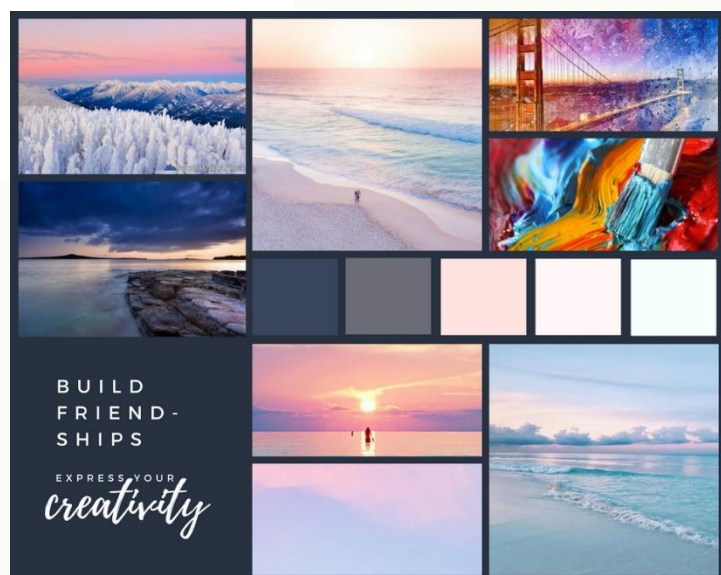
A secondary point of contention involved the colours and fonts that we would use for the final website. Using another website application, Coolors (a thin client application), we built a palette of colours we thought effectively conveyed the overall, relaxing, soothing sense that we wanted. We thought that this was the appropriate atmosphere to give our users, as our goal was to convey the feeling that art was boundless and unrestrained by rules and regulations.

Art should be unfettered - any composer, artisan, painter, inventor should be encouraged to traverse uncharted territory, to feel limitless. We wanted to design a tool that would feel familiar and easy to use – it should not be a hindrance, some chain holding you down. It is your guide on this adventure.

This is how we felt when we designed our mood board, and this was the message that we wanted to communicate to our users. We included images of the vast spaces of the sea, the horizon, the sky, forests, and the Golden Gate Bridge. It is designed to encourage the viewer to feel free.

We combined both artwork and photos to demonstrate that users are completely free to choose the type of art they wanted to show on our platform. The light and soft colours were used as a method of illustrating that we are not about telling artists what to do – we are supportive, not authoritative.

We are about helping them in whatever they want to create.

Development Process

With the basic outline and theme completed, it was time to begin building the final product.

Throughout the development of the website, we were obsessed with simplifying and removing unnecessary components.

Our application should not feel like a chore to use; users shouldn't feel the need to edit and work on the timeline to make it look pleasing as their time and effort would be better spent working on their chosen creative skills. Again: it should be simple and easy to use.

That is why when we designed our timeline, we reduced the steps involved in editing and creating a project to just one.

When creating a project, you're only required to add the name.

When editing a project, you're only required to add an image or a description.

The timeline is built for you, with the dates, structure, and overall look from the get go. Images are displayed in chronological order by the time of upload. We have optimized this for a more responsive feel, so the way in which your content comes together feels intuitive and understandable.

Privatized content is only accessible after the user has

2008

2
feb

I didn't really know what I wanted to draw, but then I took some inspiration from this anime I was watching and sketched out this girl. No idea what I'm going to do next :')

12
feb

Feeling sooo lazy this week, and I'm totally swamped by exams so I didn't really draw this past week... But I have a good idea of what I'll add next week!
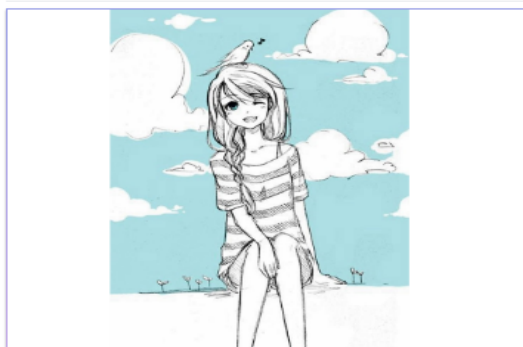
21
feb

Ta dah! I think the bird really adds a nice touch :)

2009

28
AUG

Wow it's been almost a year since I touched this project! I ended up drawing a bunch of other things before getting back to this one - I was rly happy with it.
But when I was going through my pictures again, I really thought that a background would be nice... so here ya go!

been authenticated, and actions such as commenting on other peoples' projects is only allowed if the user has logged in.
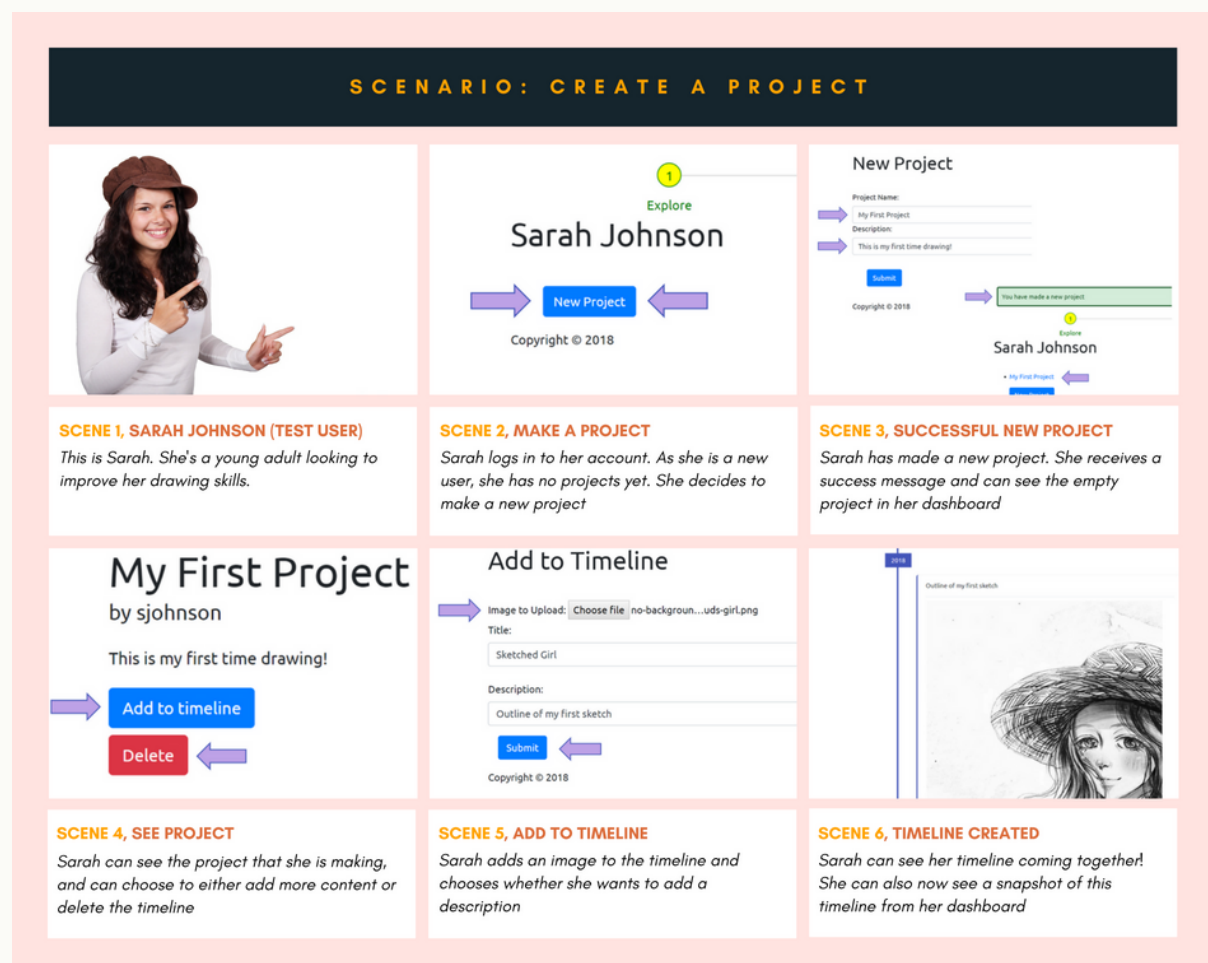
We built a robust and flexible search engine which takes any word you entered and finds any project which contains that as a substring.

We've worked very hard to create a project which is, while not perfect, easy to use.
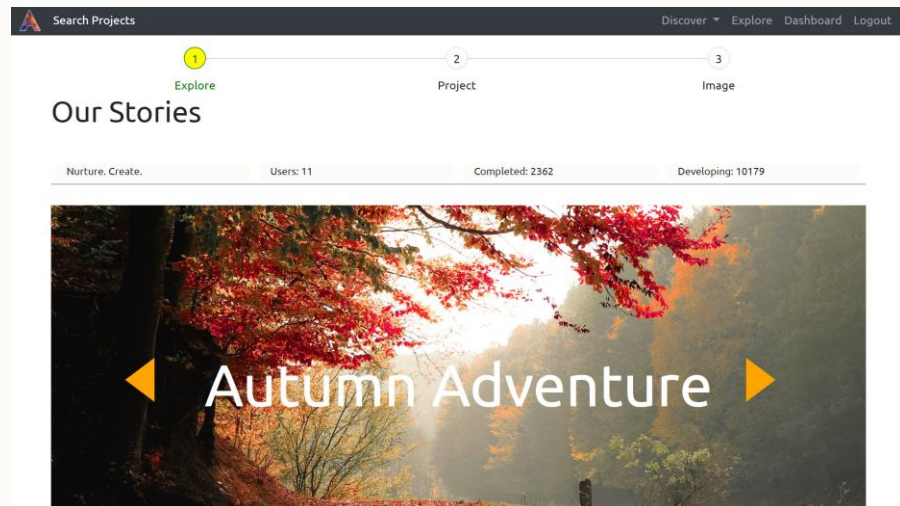
Standard Use Case

The usage of our application can be best illustrated through the following scenario. In this scenario, Sarah logs in, creates a project, and adds an image to the project.

SCENARIO: CREATE A PROJECT

SCENE 1, SARAH JOHNSON (TEST USER)
This is Sarah. She's a young adult looking to improve her drawing skills.

SCENE 2, MAKE A PROJECT
Sarah logs in to her account. As she is a new user, she has no projects yet. She decides to make a new project

SCENE 3, SUCCESSFUL NEW PROJECT
Sarah has made a new project. She receives a success message and can see the empty project in her dashboard

SCENE 4, SEE PROJECT
Sarah can see the project that she is making, and can choose to either add more content or delete the timeline

SCENE 5, ADD TO TIMELINE
Sarah adds an image to the timeline and chooses whether she wants to add a description

SCENE 6, TIMELINE CREATED
Sarah can see her timeline coming together! She can also now see a snapshot of this timeline from her dashboard

Future Designs

Due to unforeseen circumstances within the team, there were several components of the project which we never implemented.

However, regardless of where we decided to take this project, it would be a very refined and deliberate evolution of the current project. It would retain the core concept of simplicity and ease of use at its heart.

Additional designs we would have liked to add given more time would be randomized colours for each timeline. We also wanted to build a fully functional forum. We wanted to separate the projects in the user dashboard between 'Completed' and 'In-Progress'.

We built a functioning content modal for the home page which would dynamically change its content depending on which project was clicked but we were not able to implement that successfully with the backend.

Social Media integration on the project would have been a welcome addition to the suite of available functionality on the website. We also would have loved an easier way of connecting with appropriate mentors besides commenting on projects.
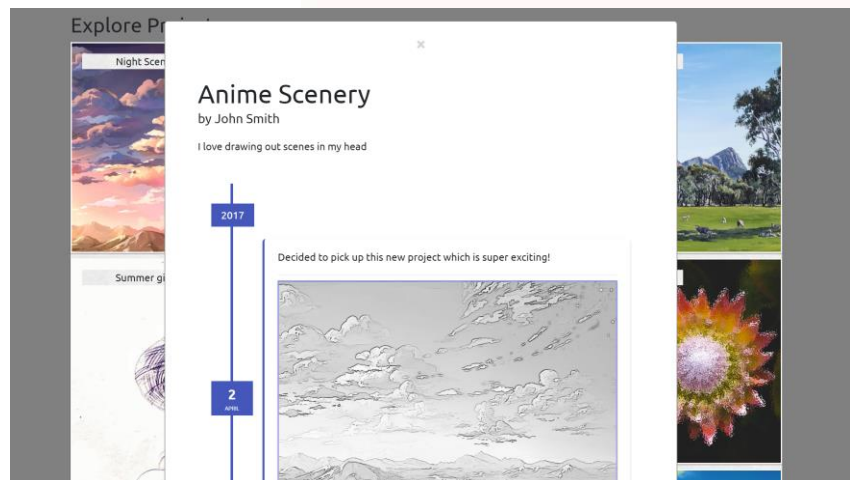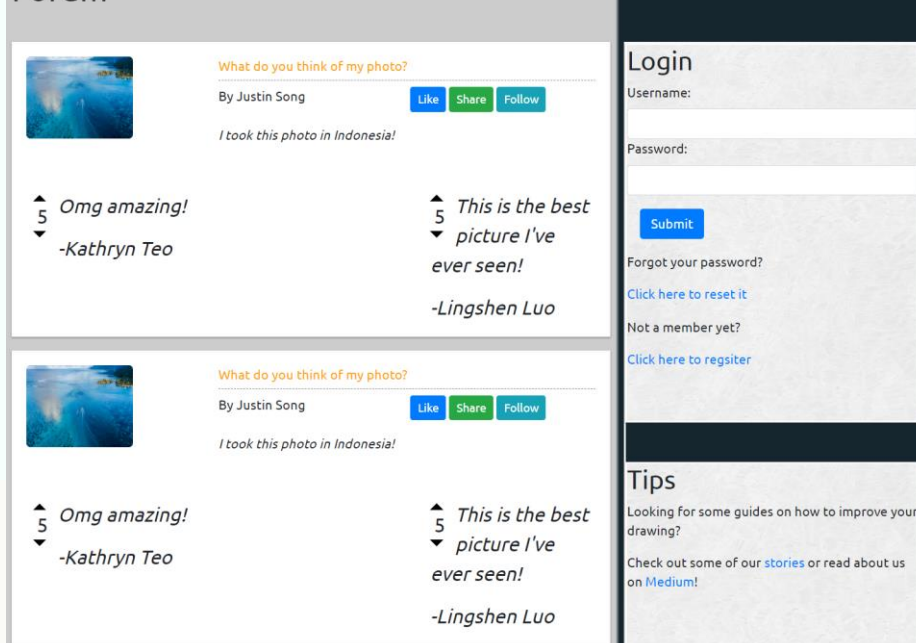
Lastly, we would have liked to have our forum up and running.

We still consider the networking which could have been achieved through our platform to be a vital component of the app (in fact, the mentor connection function was initially meant to have been added in via the forum).

System Architecture
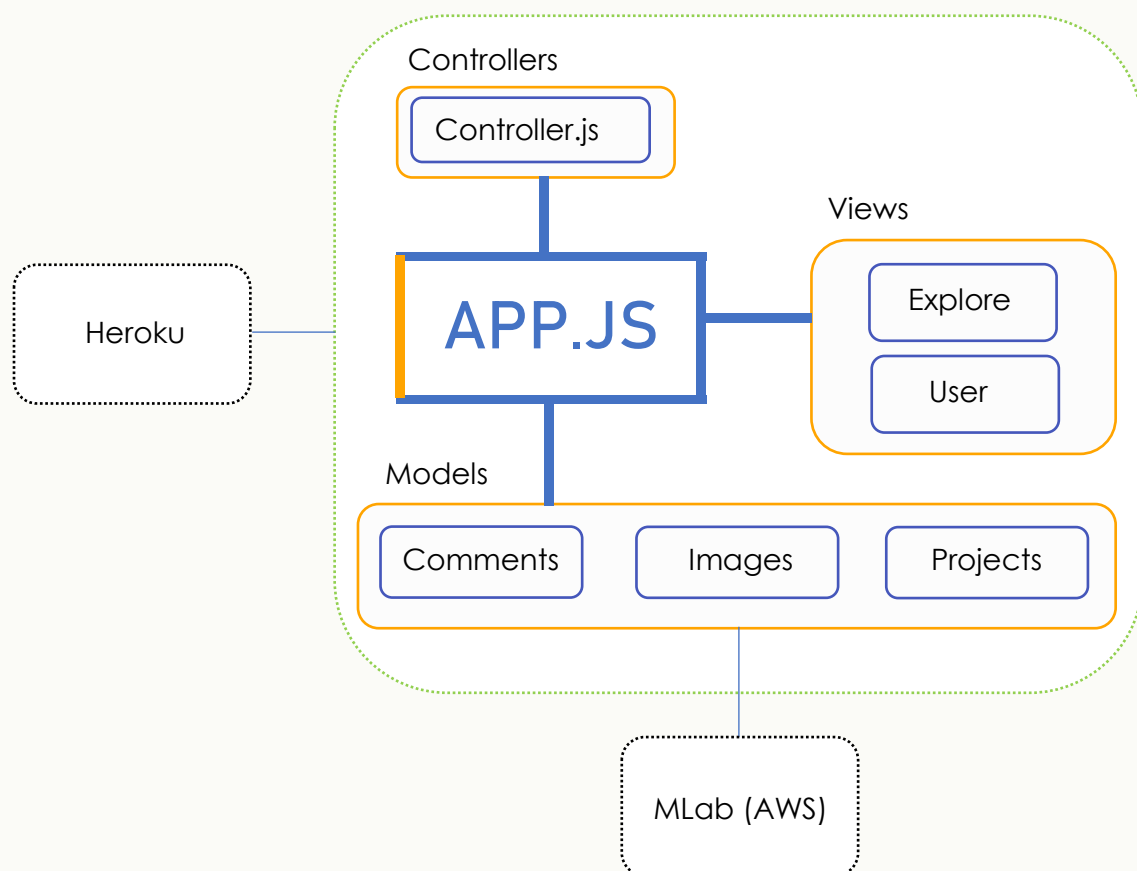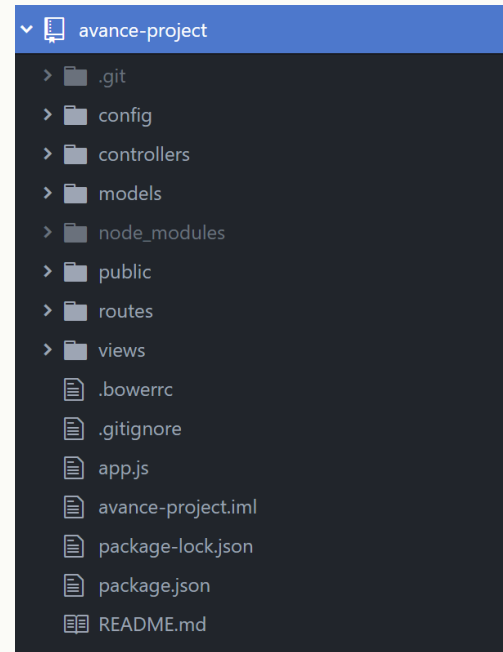
Our application used the following:

- Express (as the framework)
- EJS (as the file format for the views)
- Bootstrap (for the Navbar)
- MongoDB and Mongoose for the backend

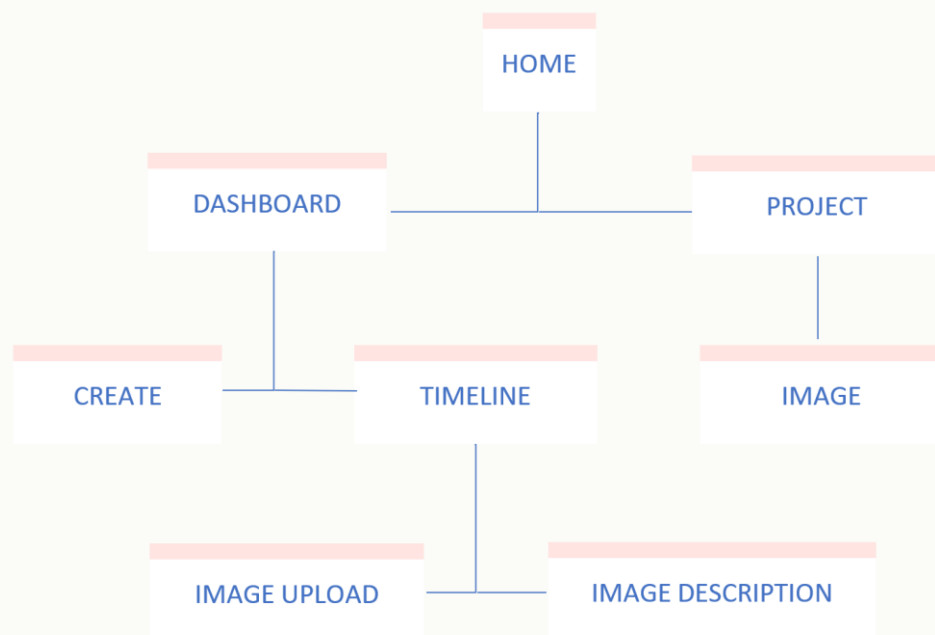The following packages were also used:

- BCrypt and Passport (for user control)
- Body-Parser (to read form inputs)
- Connect-Flash (to show flash messages)
- Multer, and GridFS (to store image files and load it appropriately)

The overall structure of the files was as follows:

- 'models' to store the schemas used in the database
- 'public' which contains all the public files which interacted with the EJS files directly (Bootstrap, CSS such as style.css, and specific JS files).
- 'routes' which contains the routes to different pages
- 'views' which stores all the EJS files for every page
- 'app.js' as the main function to load

```
avance-project
  > .git
  > config
  > controllers
  > models
  > node_modules
  > public
  > routes
  > views
    .bowerrc
    .gitignore
    app.js
    avance-project.iml
    package-lock.json
    package.json
    README.md
```

Information Architecture

```
                    HOME
                     |
        +------------+------------+
        |                         |
    DASHBOARD ----------------- PROJECT
        |                         |
   +----+----+                    |
   |         |                    |
CREATE    TIMELINE              IMAGE
             |
        +----+----+
        |         |
  IMAGE UPLOAD  IMAGE DESCRIPTION
```

Task Allocation

Kathryn Teo:

Kathryn was in charge of our overall design and structure.

Given that Kathryn had done the most setup work (building the mood board, a fully functioning Marvel schematic, our colour scheme and style), she was only in charge of the basic views such as 'Upload Image' and 'Create a Project', but she also went ahead and built the basic framework for the timeline which we would eventually use. She also worked on creating the suitable routes towards the views. She also built the 'Coming Soon' page.

For the backend, Kathryn was responsible for the file upload system, and she also rebuilt our routing system, so it was more intuitive from a user perspective. She also arranged built the dynamic timeline to automatically extend with each image added.

Kathryn was also entirely responsible for the production of the video – from the script, to the editing, the directing was completely organized by her. The sourcing of appropriate music and video as well as the filming of content used was also arranged by her.

Kathryn also helped in providing some of the findings and online resources used in this report, as well as the mood board shown in the 'Design Process' section.

Justin Song:

Justin was in charge of building the website.

He built the explore page, final timeline, user dashboard, navigation bar, messaging template, forum, search function, basic pages (like login, registration, support, and

mission), and everything related to dynamic JavaScript content (i.e. content modals and the image slider on the front page). He also created the sample projects.

For the backend, Justin built the functionality for user authentication and registration (i.e. how they would login, which pages they had access to), social integration (comments and the sharing of projects), and the creation of projects. He was also in charge of integrating the backend with the frontend, for instance, adjusting the navbar to be different depending on whether the user had logged in.

Justin also wrote this report. The structure and the content used were decided by him.

Lastly, Justin was in charge of the management of the GitHub repository. Given that he had a deeper understanding of the code and how it worked, Justin was also in charge of assigning the tasks to each of member of the team.

Lingshen Luo:

Lingshen was in charge of the user experience.

He was originally in charge of building the user dashboard and managing the community functionality (i.e. comments).

Unfortunately, due to language barriers and difficulty understanding content in the subject (for instance, how to use GitHub and MongoDB), Lingshen was not able to build these components so the sections of the website which were originally Lingshen's responsibility had to be built by other members of the team.

Nevertheless, Lingshen did try to complete his work. On the right is an image of the original dashboard which he created but was unable to implement.

Lingshen wrote the content for the mission and support pages.
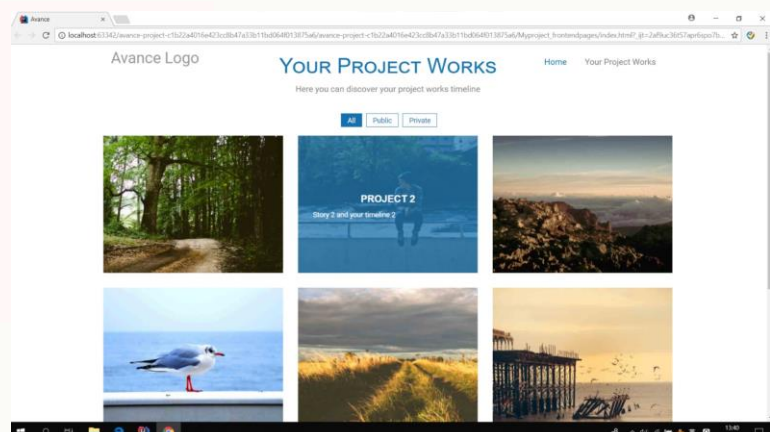
Reflection

If we had to do the project again, we would probably start by further simplifying the project (for instance, not building the breadcrumbs feature – that time would have been better spent working on other core features). Given the timeframe and the skills we had when we first started, our project was too ambitious, and we had too many components.

We would also have stricter deadlines and a weekly review of everyone's code. This would have been helpful in uncovering issues earlier on. For instance, we assumed Lingshen had completed his sections of code but were unaware of his issues until Week 11.

We also would've used Pug for improved code readability. Towards future students, we recommend planning well as the workload is immense. We also recommend that less is more – keeping the core functionality simple and clean is a lot of work in and of itself.

Conclusion

You understand the nature of an art piece so much more when you understand how it came to be. By tracing the path taken by an artist, we see growth, we see learning.

We see creation in its rawest, purest form.

One thing so easily overshadowed in our complicated, busy world is the importance of listening – and seeing, because as we all know, the very best ideas, the very best art we have to offer, so often comes from the quietest voice.

Art is fragile. Art is unpredictable in that we never know when or where someone will find inspiration, and we can never know how many of those moments someone will have.

We want to create an environment that will be there for people when those precious moments arrive.

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