PLAN.Z

DANNY R | COLUMBIA UNIVERSITY

PLAN.Z, an AI suite offering photographers robust scenery information enabling one to plan from A to Z about locations. Whether one seeks to collect inspiration or visualize what a specific mountain peak looks like from a 360 view of angle, in any season, night or day, any sun or moon position, or any weather exposure like snow, fog, or rain – it is possible with PLAN.Z.

NAME

PLAN.Z

SUBTITLE

Take land/seascape photography compositions, inspiration, planning, and research to the next level. Visualize what scenery looks like from different angles, times, seasons, weather scenarios, and other features.

FEATURES

- Tides
- Shadows
- Gallery Views
- Constellations
- Tools & Calculators
- Moonrise & Moonset
- Weather Predictions
- Create & Save Plans
- Pin & Save Locations
- 3D Map Visualization

- Cloud & Fog Coverage
- AI generates search images
- Multi keywords Narrow Results
- Sunrise & Sunset Golden & Blue Hour
- VR: Phone's GPS, compass, & camera to visualize framing
- Type a name, location, coordinate, search by photo, or click on geographic map locations
- Seasonal, Hourly, Weather, & Multi-Angle Views

DESCRIPTION

PLAN.Z

Whether professional or hobbyist, landscape and seascape photographers tend to have favorite, frequented, must visit, and yet to be found locations to shoot. This involves some level of planning, familiarity, and inspiration. The process typically begins with researching locations through the internet and social media. At times, it's difficult to find certain images at specific desired angles, perspectives, seasons, and times of day. Photographers usually go hours ahead of time and scout framing ideas. One might also use maps, seasonal information, hourly light coverage, weather, sunrise and sunset, tides, and the positions of the moon, sun, and stars, amongst other components. Locations tend to look different depending on season, time, angle, and photographer.

With **PLAN.Z**, and its suite of tools, you can easily visualize your prospective location from any angle, season, and time of day. **PLAN.Z** will generate AI trained accurate historical and prediction generated views within a 3D map or image gallery. Research and view all your options, plan from A all the way to Z, gain inspiration, ideas, and potentially be at the right place at the right time for the compositions you desire.

◎ **LOCATION:** NYC LANDMARKS   ◎ **VIEW POINT:** S/W/E, VERTICAL   ◎ **SEASON:** FALL || WINTER

◎ **COMPONENT I:** SUNSET   ◎ **COMPONENT II:** GOLDEN HOUR LIGHTING   ◎ **COMPONENT III:** DENSE CLOUD, WATER

Highest cloud coverage density begins ~ November & lasts for 7.4 months, ending around June 26. NYC is cloudiest is January, on average the sky is overcast or mostly cloudy 52% of the time.

SEARCH & GALLERY

LOCATION: NYC

VIEW POINT: S/SW

HORIZONTAL
LANDSCAPE

SEASON: FALL || WINTER

COMPONENT I: SUNSET

COMPONENT II: GOLDEN HOUR LIGHTING

COMPONENT III: CLOUD COVER, WATER

The sun sets in the West in NYC

Golden Hour denotes orange & yellow hues during sunrise and sunset

Sunrise & sunset typically last ~ 5 - 15 minutes

Blue Hour denotes blue & purple hues after sunset & before sunrise
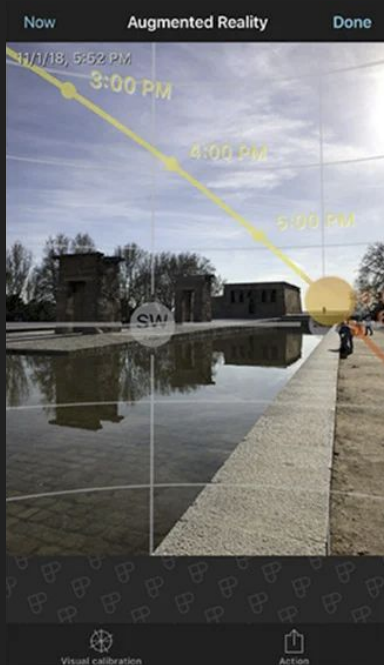

SEARCH & GALLERY

VR view placing user in search location and allowing multi-angle perspective views to assist in composition framing ideas

AI will also apply overlay matching search criteria. The overlay will be realistic historic, photographed, recorded, and predicted average weather condition scenery.

Now   Augmented Reality   Done

11/1/18, 5:52 PM

3:00 PM

4:00 PM

5:00 PM

SW

Visual calibration   Action

Now   Night AR   Done

5/6/19, 4:02 AM

-30°

S

-60°

Visual calibration   Action

Photos from PhotoPills app

ORGANIZATION

Describe Your Organization

ENVIRONMENT

CONDITIONS IN WHICH OUR ORGANIZATION OPERATES

WHAT'S CHANGING AROUND US? (COMPETITORS, CUSTOMERS, PARTNERS, TECHNOLOGY, CULTURE, ETC.)	WHAT DO WE THINK ARE THE ROOT CAUSES OF THOSE CHANGES?	IF THESE ROOT CAUSES CONTINUE, WHAT WILL THE WORLD LOOK LIKE IN TEN YEARS?
• Camera phone quality is increasing • Photography is more popular • VR implemented in photo apps • Photo apps becoming more useful • Apps providing more planning & assistance tools • Mirrorless camera technology is matching and exceeding DSLR	• Increased phone image quality • Social media popularizing art • New age of photo editing software being developed • Travel & Travel photography becoming more popular • New wave of camera & lens technology being developed • Lockdowns inspiring people to pursue the outdoors & hobbies	• Someone else may develop the AI/ VR ideas • Loss of potential innovations • It's possible the gap in visualization will not be filled • Photographer discomforts & issues may continue

PLAN. Z

ORGANIZATION

Describe Your Organization

PURPOSE

THE REASON WHY WE CHOOSE TO WORK TOGETHER INDEFINITELY IN RESPONSE TO OUR ENVIRONMENT

WHAT DO WE WANT TO CHANGE ABOUT THE ENVIRONMENT?	WHY DO WE WANT TO MAKE THE CHANGE	WHAT SKILLS DO WE HAVE THAT MAKE US CAPABLE OF CHANGE?	WHAT WILL THE WORLD LOOK LIKE IF WE SUCCEED?	WHAT'S OUR ONE-LINE MISSION?
Bring our passions, skills, and interests together to make an open, comfortable, and motivated work environment focused on communication, development of ideas, and the drive to innovate.	Desire to elevate our craft, photography, to the next level by combining it with the new technologies to create something new and game changing.	We are photographers at some level and have a collection of professional backgrounds from software engineers to product managers. We have the maturity to communicate, be consistent, and see projects through.	The photography community will have a new tool to elevate their craft	Visualize all possible views of a location and create your perfect composition

ORGANIZATION

Describe Your Organization

STRATEGIES

THE BETS WERE CURRENTLY MAKING TO FULFILL OUR PURPOSE

WHO DO WE TARGET TO SERVE?

Users:
- Travelers
- Professionals
- Photographers
- New Hobbyists

WHAT DO WE OFFER THEM?

- Photography planning tools
- User images as reference & inspiration
- AI & VR visualization of locations

HOW ARE WE DIFFERENT?

- Team of photographers
- Offer VR & AI visualizations that are not offered anywhere

HOW DO OUR CUSTOMERS FIND US?

- Conventions
- Social Media
- Competitions
- Word of mouth

WHO DO WE NEED ON THE TEAM?

- Photographers
- PM/ Managers
- Software Engineers

HOW DO WE RUN THE BUSINESS?

- Agile Development
- Outsource if needed
- User feedback & Interaction
- Lots of testing

WHAT DO WE DO WITH OUR MONEY?

- Healthy cash reserves
- Invest in tools & resources
- Surveys, feedback, wants
- Tech development

WHO CAN HELP US THAT ISN'T US? <PARTNERS>

- Consulting groups
- Engagement firms
- Photography sponsors
- Photography companies
- Photo related entities

WHAT WILL GROWTH LOOK LIKE?

- Heavy usage
- Strong reviews
- Accurate information
- Widespread implementation even outside target audience

HERE FOR BALANCE (LOL)

ORGANIZATION

Describe Your Organization

SYSTEMS

THE TOOLS WE NEED TO ALIGN BEHAVIOUR ACROSS OUR STRUCTURES

WHAT WE OWE TO EACH OTHER <OUR VALUES>	OUR MOST IMPORTANT MEETINGS & RITUALS	OUR SHARED NORMS <RULES WE OCCASIONALLY BREAK>	OUR GLOBAL POLICIES <RULES WE SHOULDN'T BREAK>	OUR GLOBAL STACK OF TOOLS
- Clear, honest, consistent communication - Constructive feedback - Real world feedback & ideas - Useful tool implementations - Accurate testing & research - Passionate & driven environment	- User surveys & feedback - Team feedback, ideas, wants - Daily team meets - Agile approach & Bi-Weekly large meets	- Expertise over user or newbie feedback - PLAN.Z team feedback over user	- Consistency is key - Aesthetics are key - Data accuracy is key - User experience is key - Search relevance is key	- Slack - Google Docs - Python IDE's - Adobe Suite - Google Maps - PM Platforms - Lots of snacks & matcha lattes

ORGANIZATION

Describe Your Organization

STRUCTURES

DIVISION OF WORK & RESOURCES WE NEED TO EXECUTE OUR STRATEGIES

Individuals & Interactions NOT Processes & Tools

Responding to Change NOT Following a Plan

PLAN

**Guided by Collection
of
Values & Principles**

Customer Collaboration NOT Contract Negotiation

Working Software NOT Comprehensive Documentation

What is the Project Plan?

PLAN.3Z

ORGANIZATION

Software Management

Select Task
Code
Test
Push Working SW
Peer Review
Impedances, To/Will Do
QA
Next Task

Business Management

User Focus, Advocacy, & Communication

Allowed Features & Options

Documents

Contracts

Legal

Project Management

Scheduling Management

Scope Development

Management Plans

Task Management

Team Structure

Quality & Support Management

Accept Working SW
Meet Requirements
Confer:
Clients
Team
PM

Closure Management

Review & Compare Deliverables
Share Deliverables
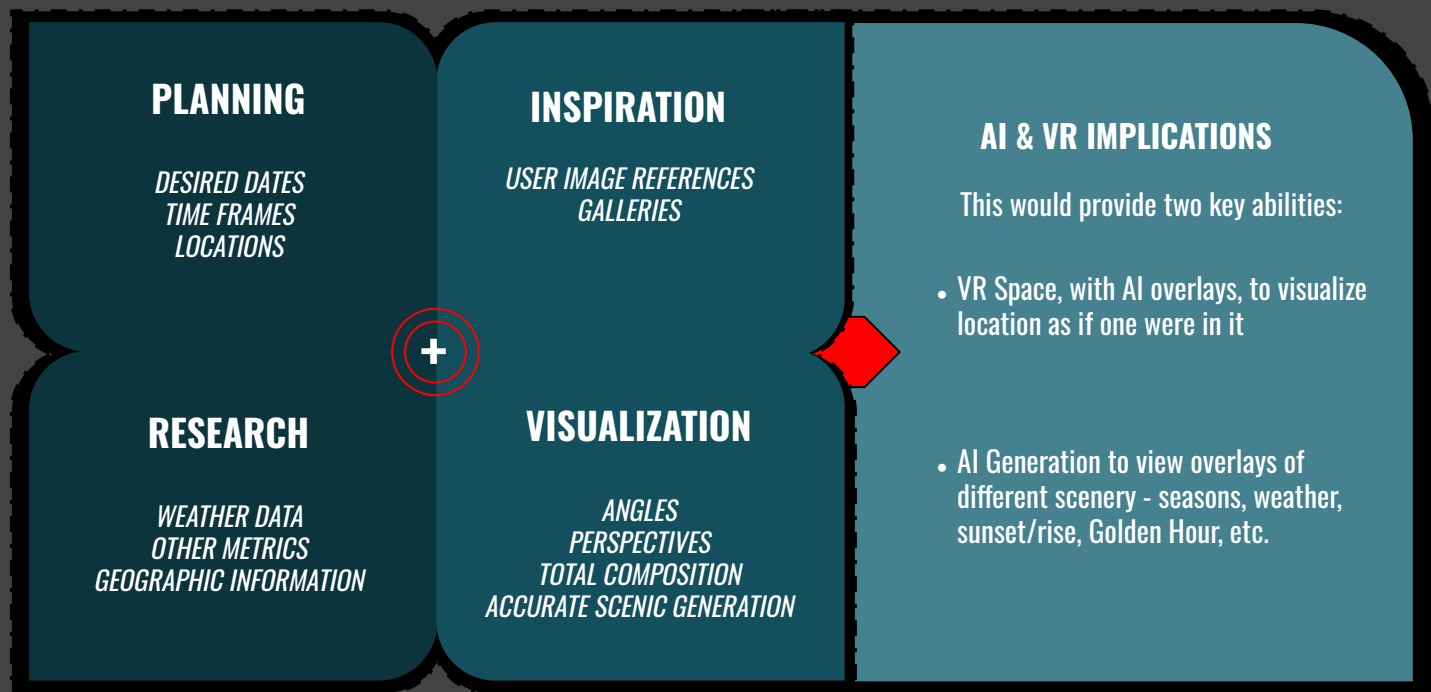Acceptance
Documents
Formalities
Signature
Hand Off

ORGANIZATION

Describe Your Organization

MEET

TWO WEEK
TIMELINE

DISCUSS
PLANS | DESIRES

PLAN. Z
AGILE
METHOD

SELECT
TASKS

BREAKDOWN
FEATURES INTO
COMPONENTS

AI USE CASE

What is the Most Pressing AI Use Case That is Feasible?

PLANNING

DESIRED DATES
TIME FRAMES
LOCATIONS

INSPIRATION

USER IMAGE REFERENCES
GALLERIES

AI & VR IMPLICATIONS

This would provide two key abilities:

- VR Space, with AI overlays, to visualize location as if one were in it

- AI Generation to view overlays of different scenery - seasons, weather, sunset/rise, Golden Hour, etc.

RESEARCH

WEATHER DATA
OTHER METRICS
GEOGRAPHIC INFORMATION

VISUALIZATION

ANGLES
PERSPECTIVES
TOTAL COMPOSITION
ACCURATE SCENIC GENERATION

DATASETS & MODEL

DATASETS	HAVE	NEED	DESCRIPTION
SATELLITE MAPS	✕	✓	• GOOGLE MAPS • ARCGIS • 3D SATELLITE MAPS TO DEPLOY APP TOOLS
NOAA WEATHER	✕	✓	• HISTORIC WEATHER DATA • SEASONAL TIMELINE DATA • FORECASTS & FUTURE PREDICTION
NOAA | NASA SPACE WEATHER, CONSTELLATION, PLANETARY	✕	✓	• SPACE WEATHER DATA • SUN & MOON POSITIONS • TIDES, SHADOWS, EARTH POSITION
RAW FILE PHOTOGRAPHS	✓	✓	• UNEDITED PHOTOGRAPHS • TEAM, USER, PURCHASED, & SITE HOSTED PHOTOS • SPECIFIC SCENIC SHOTS: TIME, LOCATION, SEASON, ETC.
IMAGERY | VIDEO	✓	✓	• GENERAL IMAGERY & VIDEO OF LOCATIONS, WEATHER, LIGHTING, TIME, SEASON, ETC.

D A T A S E T S & M O D E L

PRETRAINED

SUPERVISED

MODEL

CUSTOMER BUILT
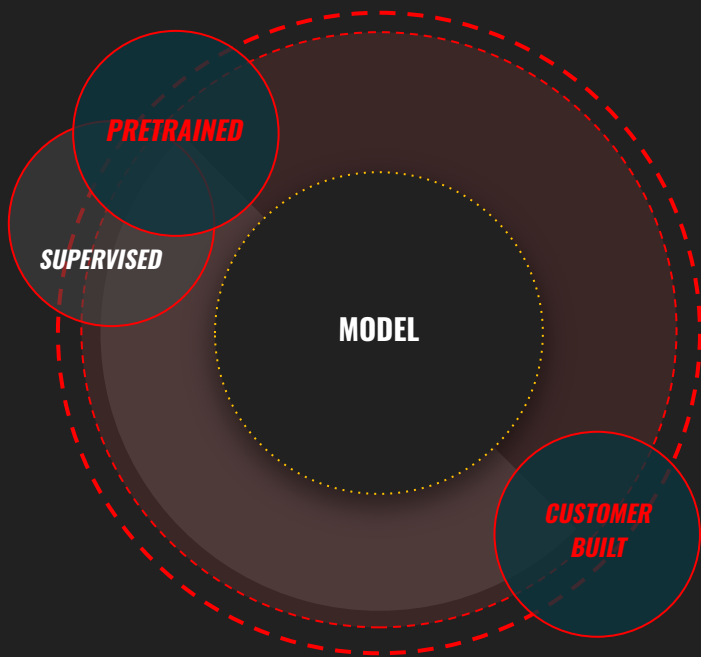
WHY?

PRETRAINED | SUPERVISED

We use a pretrained model trained on large scale image classification tasks. Since we are dealing with photography and the changes of nature we focus on realistic accuracy, as well as unedited RAW image files. Our models focus on object detection, image classification, & segmentation. Some examples are labels for water, snow, clouds, sunset, & perspective/ foreground view, amongst others.

We use supervised learning to accurately and consistently order and generate required specific data. We label specific data to train functions to classify and predict accurate results. This consists of input and the desired output, which allows us to adjust our function based on produced output, that the model learns over time. We separate these into two learning problems: classification and regression

Classification uses algorithms to accurately assign test data into categories. It recognizes dataset components and draws conclusions on how they should be labeled or defined.

Regression makes projections by developing relationships between dependent & independent variables.

CUSTOMER BUILT

We also implement a customer built model that we work into our learning functions. Photographers tend to have years worth of images in their collection with substantial data. Consistent and relevant user input is supplemental to maintain consistent accuracy and grow our dataset. We supervise this approach and employ strict user upload requirements that accurately label image components

STAKEHOLDER PROCESS

How Will This Implementation Affect the Process for Different Stakeholder Groups?

STAFF → **USERS** → **INVESTORS** → **LARGE PARTNERS** → **SPONSORS**

STAFF

STAFF IS PREDOMINANTLY MADE UP OF HOBBYIST PHOTOGRAPHERS WITH REAL WORLD PROFESSIONAL SKILLS.

THIS IMPLEMENTATION WILL ALLEVIATE TIME AND STRESSORS INVOLVED WITH THE PLANNING, RESEARCH, SCHEDULING, & COMPOSITION OF PHOTOGRAPHS.

IT MAY ALSO DEVELOP INSPIRATION AND NEW INSIGHTS TO KNOWN AND UNKNOWN LOCATIONS.

FOR FORWARD PROGRESS, THIS MAY ALSO MOTIVATE FURTHER INNOVATION, DEVELOPMENT, FEATURES, AND TOOLS.

USERS

OUR APP IS HEAVILY USER FOCUSED ON HOBBYIST, PROFESSIONAL, AND NEWBIE PHOTOGRAPHERS. OTHER GROUPS ARE TARGETED AS WELL, SUCH AS TRAVELERS, GUIDES & TRIP PLANNERS, & PHONE PHOTOGRAPHERS.

THIS IMPLEMENTATION WILL HELP GUIDE TRIPS, PLANNING, AND INSIGHT TO PHOTOGRAPHY OR VACATION LOCATIONS.

IT MAY ALSO PROVIDE THE SAME BENEFITS OUR STAFF ACQUIRE.

INVESTORS

INVESTORS MAY DEVELOP NEW FORMS OF TOOLS, REVENUE, & IMPLEMENTATIONS ONCE THE LAUNCH AND WIDE USE OCCURS.

SUCCESS MAY HELP BUILD PROFIT, STABILITY, & NOTORIETY.

LARGE PARTNERS

IF POSSIBLE THERE MAY BE LARGE PARTNERSHIPS WITH PHOTOGRAPHY BUSINESSES SUCH AS NIKON & CANON. THERE MAY ALSO BE PHONE PRODUCER PARTNERSHIPS WITH SAMSUNG & APPLE AS A PRE-INSTALLED APP.

THIS IMPLEMENTATION MAY HELP DEVELOP A NEW MARKET, AS WELL AS OPEN A NEW SECTOR FOR PRODUCT INNOVATION TO MATCH THE CURRENT PROGRESS IN CAMERA TECHNOLOGY.

SPONSORS

IF POSSIBLE THERE MAY BE OPPORTUNITIES TO WORK WITH OTHER ENTITIES SUCH AS FORUMS, SOCIETIES, EVENTS, REVIEWS ETC. SOME THAT COME TO MIND ARE FLICKR, STOCK PHOTO SITES, NATIONAL GEOGRAPHIC, COMPETITIONS, PHOTOCENTRIC SOCIAL MEDIA, DPREVIEW, & PHOTOGRAPHY LIFE.

THIS IMPLEMENTATION MAY HELP DEVELOP NEW PARTNERSHIPS, MARKETING, LARGER USER BASE, MORE TRAFFIC, AND OTHER POSSIBILITIES.

VALUE

What's the Potential Value?

No Profit

Makes life easier for land/seascape photographers

Supplements research & planning

Inspiration, views, & galleries

Visualize angles, perspectives, & all scenery components over time

Can use for and while traveling

Provides useful tools & features

AI scenery not offered by anyone else

Profit

One Time Charge

Many popular photography tool apps sell a license to use the app. I personally have spent, at the most, $9.99 for one. I believe this is a fair price considering the tools, features, & all around utility that make things easier when I use them.

Pre-Installed

With the growing popularity of phone photography and the developments in camera phone technology there's potential profit in partnering with manufacturer's to have the app available in all new phones.

R E F E R E N C E S

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