django girls

Mission

WELCOME!

SPONSORS

MEDC

Mission Economic Development Corporation

python

SOFTWARE FOUNDATION

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Django Events Foundation

NORTH AMERICA

HOUSEKEEPING

- Restrooms are in the lobby next to the registration table
- Please be courteous of any trash or belongings you might leave behind on tables
- Do NOT touch the murals
- Use #pyladiesrgv #djangogirlsmission so we can see your photos!

PYLADIESRGV

- Local organization aiming to increase the percentage of women in tech across the Rio Grande Valley

THE PROBLEM WITH TECH

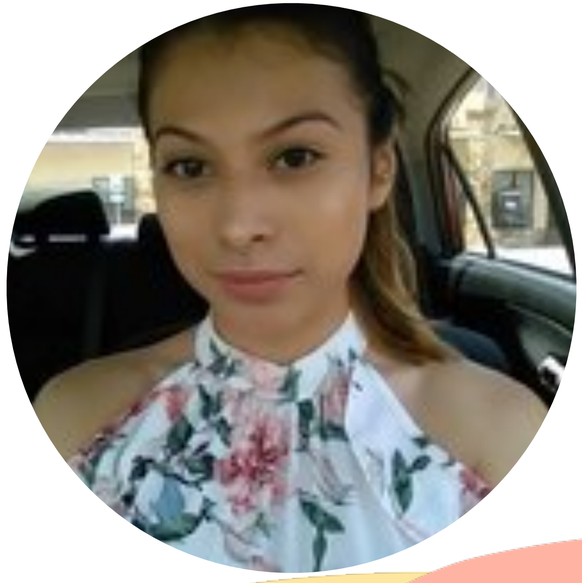
DJANGO GIRLS MISSION

- One-day, ***free*** programming workshop where women across the RGV will learn how to create their own websites

organizers

STEPHANY LOPEZ

Founder, PyLadiesRGV
@ltephanysopez



CATALINA DIAZ

Marketing Coordinator, PyLadiesRGV
B.S. Computer Science at UTRGV

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M.S. Information Technology at UTRGV

CECY SANCHEZ

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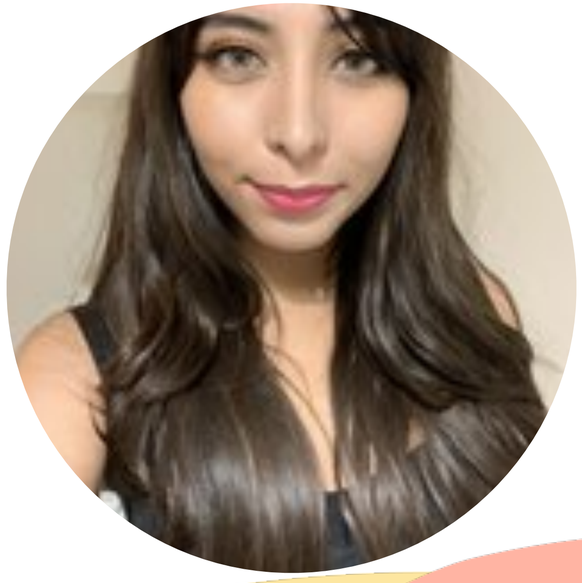
ANAHI FLOREZ

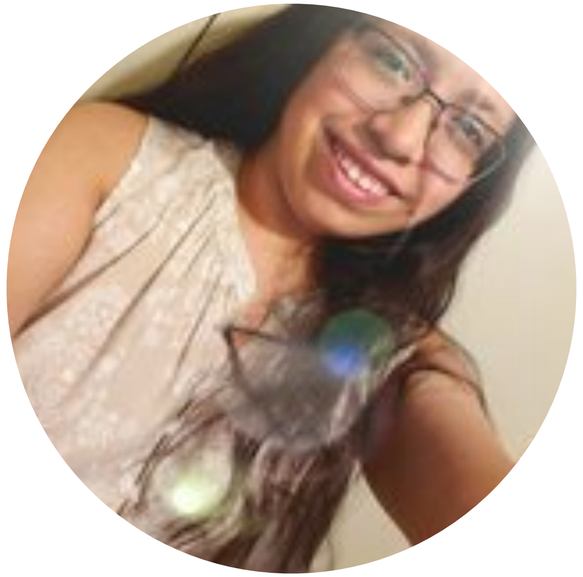
B.S. Civil Engineering student

MARIANA ESCOBEDO

B.S. Computer Science student



mentors



DORI GONZALES

B.S. Computer Science student

SONYA CIRLOS

B.S. Computer Science student

mentors

HASBANNY IRISSON GOMEZ

B.S. Computer Science graduate
Web Development Intern

DAIRA FELIX

Computer Science student

mentors

JACQUELYNN LOPEZ

B.A. Bilingual Education student

PENELOPE NGUYEN

Systers Vietnamese Women in Computing Co-Chair

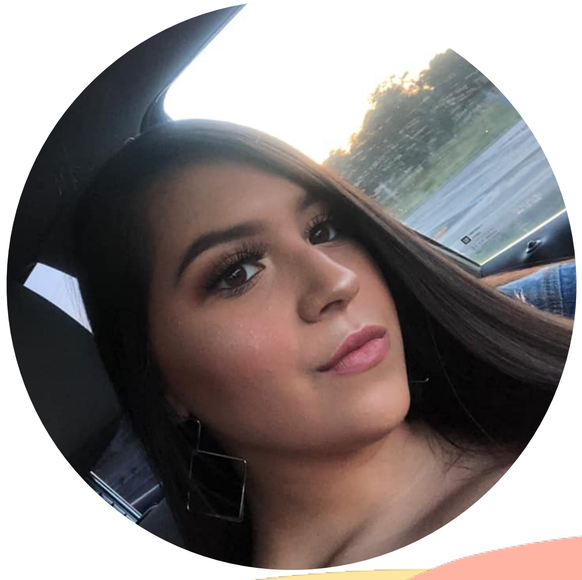
volunteers

ALICIA AYALA

CREW intern

ARLETH LOPEZ

B.S. Biology student



volunteers

RUBY MENDOZA

B.S. Computer Science graduate

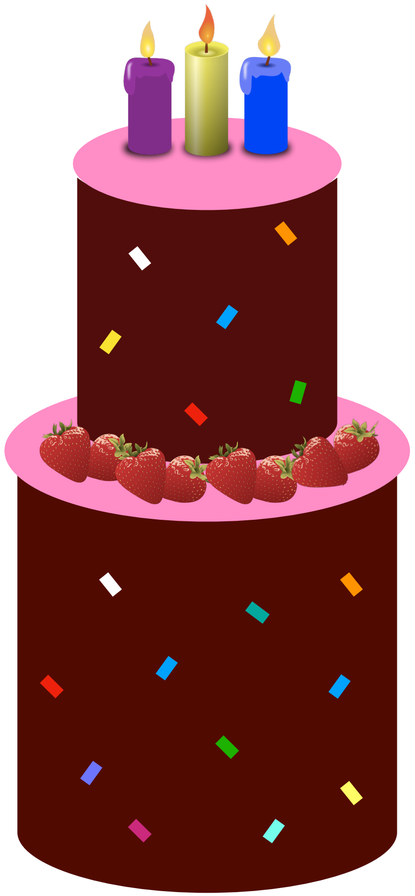
GOALS FOR TODAY:

- Get excited to build things
- Create a website from scratch and put it online
- Learn to fail and ask questions when you need help
- Meet new people
- Have fun!

LEARNING ZONES

GET IN A CIRCLE!

WE'RE MAKING A CAKE



WE'RE MAKING A BLOG

BEFORE WE GET STARTED...

- Command Line
- Python3
- VSCode
- Git
- GitHub account

THE COMMAND LINE

WHAT IS THE COMMAND LINE?

- The command line, also known as the terminal, is an app that lets us talk to our computer about our files!

  Let's open up our terminal!

COMMAND LINE

- `whoami` = prints out laptop username
- `pwd` = print out current directory
- `cd` = current directory
- `ls` = list all files in a current directory
- `mkdir` = make a new directory

PROGRAMMING WITH PYTHON

WHAT IS PYTHON?

- Python is a programming language! People use it all over the world to build websites, games, scientific software, self-driving cars, and much, much, more!

VIRTUAL ENVIRONMENTS

- Virtual environments are isolated projects written in Python that ensure your project isn't affected by any others you might have (and vice versa)

LET'S MAKE A PROJECT!

- Make a new folder named DjangoGirls
- Move to your new folder
- Make a virtual environment in your new folder
- Activate your virtual environment

INSTALLING DJANGO

- Create a file named requirements.txt in your project
- Type `”Django ~=2.2.4”` in requirements.txt, then save
- Install with `“pip install -r requirements.txt“`
- Done!

MAKING A DJANGO PROJECT

- `django-admin startproject mysite .`
- Let's investigate our new files!

MAKING A DJANGO PROJECT

settings.py

urls.py

wsgi.py

__init__.py

DJANGO - SETTINGS.PY

- Installed apps - auth, mailers, sessions
- Languages, region, time
- Databases

DJANGO – MANAGE.PY

DJANGO - WSGI.PY

DJANGO – URLS.PY

- Routes
- Each app has its own urls.py file
- Import into main project urls.py (admin included)

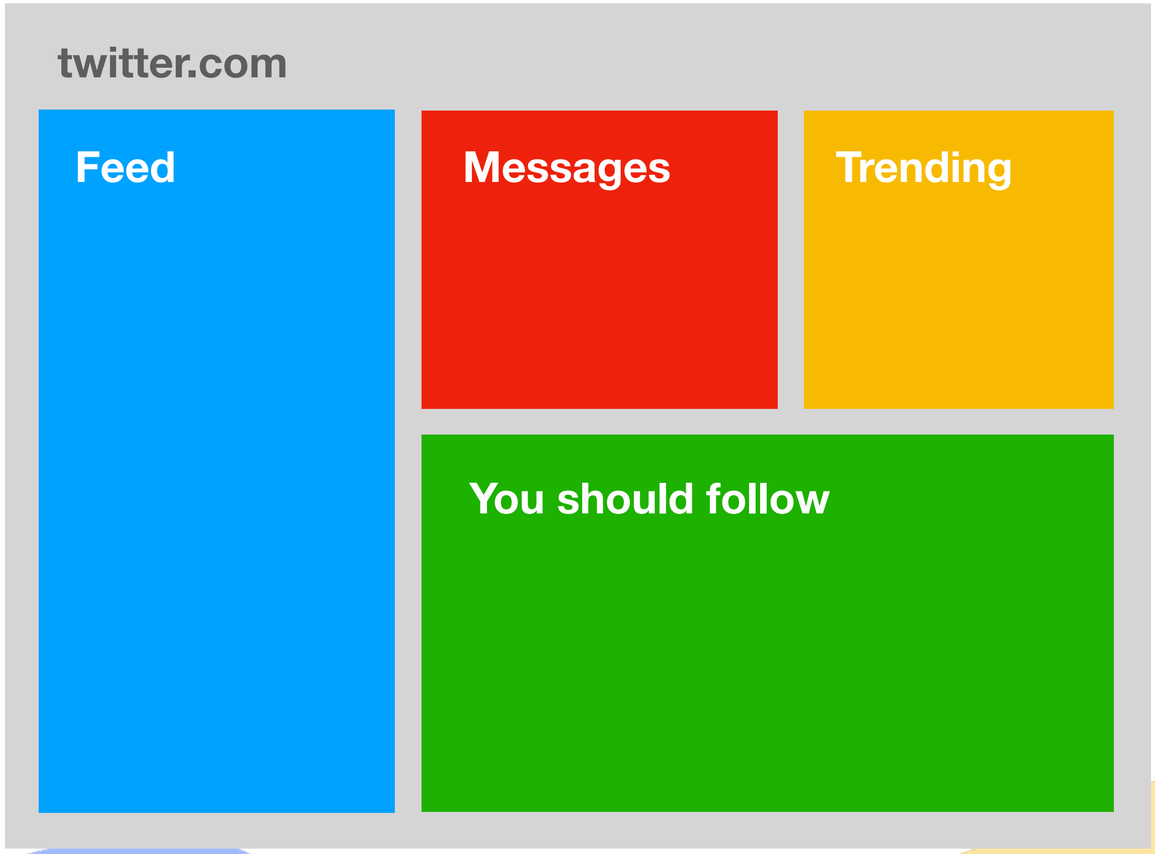
BEFORE WE GET STARTED...

- Let's run our server!
- `python manage.py migrate`
- `python manage.py runserver`

DJANGO - MS ARCHITECTURE

- Project == entire website
- Apps == smaller features of a website

DJANGO - MS ARCHITECTURE



DJANGO MODELS - OBJECTS

- Objects: collection of properties and actions
- E.g. **Cat**
- Properties: color, owner, age
- Actions: purr(), scratch()

DJANGO MODELS - POST

- Objects: collection of properties and actions
- E.g. **Post**
- Properties: title, text, author, etc.
- Actions: purr(), scratch()

CREATING A BLOG APP

- Python manage.py startapp blog
- mysite/settings.py
- Add `'blog.apps.BlonConfig'` in Installed Apps section

CREATING A BLOG POST MODEL

```
from django.conf import settings
from django.db import models
from django.utils import timezone


class Post(models.Model):
    author = models.ForeignKey(settings.AUTH_USER_MODEL, on_delete=models.CASCADE)
    title = models.CharField(max_length=200)
    text = models.TextField()
    created_date = models.DateTimeField(default=timezone.now)
    published_date = models.DateTimeField(blank=True, null=True)

    def publish(self):
        self.published_date = timezone.now()
        self.save()

    def __str__(self):
        return self.title
```

MIGRATING OUR MODEL

- `python manage.py makemigrations blog`
- `python manage.py migrate blog`

LET'S MAKE SOME BLOG POSTS!

- blog/admin.py
- Add the following:

```
from django.contrib import admin
from .models import Post

admin.site.register(Post)
```

LET'S TEST IT OUT!

- Run your server
- Create a superuser to login as an admin
- Create a few blog posts!

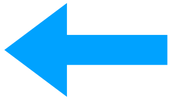
DEPLOY AKA PUT IT ON THE WEB!

- Let's deploy our websites!
- Deploying is the process of publishing your application on the Internet so people can see your website!

django girls

Mission

WHAT'S A URL?

- A URL is a web address- every page on the Internet has one! Here are a few examples:
  - facebook.com
  - 127.0.0.1:8000  This is yours!
  - djangogirls.org

YOUR FIRST DJANGO URL

- It's time to create our first URL! We want http://127.0.0.1:8000/ to be the home page of our blog, and later we'll display all the posts you created earlier!

YOUR FIRST DJANGO URL

- Open the mysite/urls.py file
- Add the include function in your import statements
- Add the following line inside the `url patterns []`

```
path('', include('blog.urls')),
```

BLOG.URLS

- Create a new empty file named urls.py in the blog folder
- Add the following lines

```
from django.urls import path
from . import views
```

ADD A URL PATTERN!

- Add your first URL pattern!

```
url patterns = [
        path('', views.post_list, name='post_list'),

]
```

HANDS-ON!

- You'll have the rest of the workshop to work through the tutorial with your group! But don't worry, you'll have your mentor to help you when you need it!

REFLECTIONS + SHOUTOUTS

THANK YOU!