

Narrative-focused video games development with Ren'Py

Susan Shu Chang

Start

About me

Quill Studios

- Developer
- Writer
- PM
- Marketing



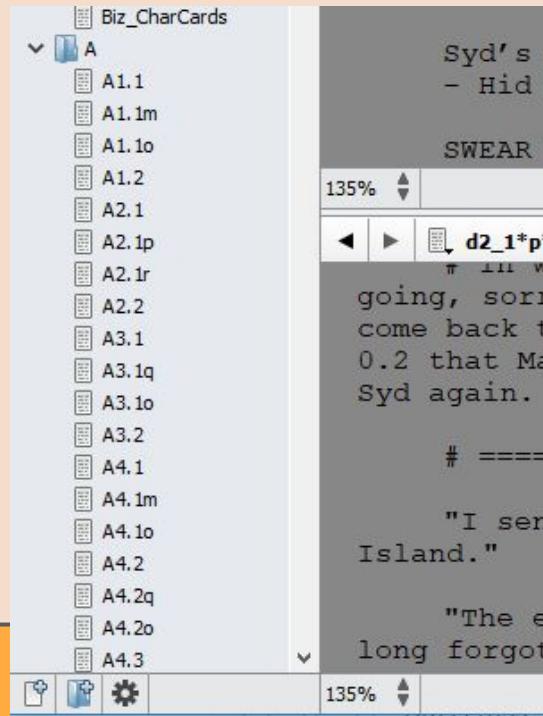
Other work

- Co-organize AISC (ML livestreams)
- Data Scientist
- susanshu.com



I started this project 2+ years ago...

ASW Draft 0.5 (backup)	Dec 29, 2017
ASW 0.4 Backup	Dec 26, 2017
ASW 0.4 Backup	Dec 26, 2017
ASW Script 0.4	Dec 23, 2017
ASW-Opening Scenes V2.0 ★	Sep 4, 2017



I have the story,
now what?



A Summer with the Shiba Inu, made in Ren'Py



Location:
Canine-da



Console
launch: June
23, 2020

Sold: 5,000,
at ~\$10 USD
(~700 ₹)
per unit



Talk overview

1. Overview of gaming industry
2. Narrative games (visual novels)
3. Ren'Py, open source Python-based game engine



Platforms: computer OS and consoles

- Windows, Linux, Mac
- Nintendo Switch
- XBox One
- Playstation 4



Console gaming in India

“The size of the console gaming market in India is estimated [...]”

- ₹700 Crore (7 billion) at the basic consumer level
- The head of Sony PlayStation claims that in India, around 7 to 8 million people play on the console regularly.



Source:

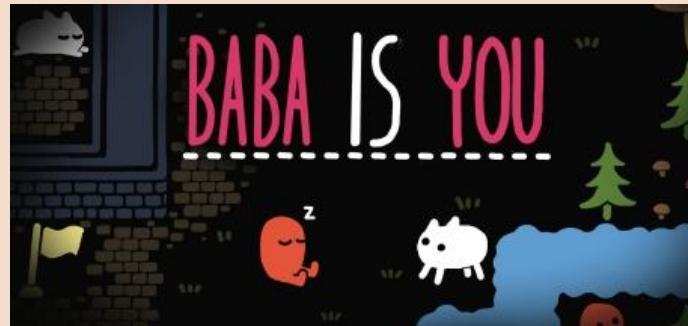
<https://www.spieltimes.com/original/the-ps4s-preponderance-in-india-a-critical-research/>

AAA studios typically are large, have funding



Indie studios are smaller, yet grew popular

(Short for independent)



Some “indies” have large budget; ambiguous

The image shows a news article from the website Gillion. At the top, there are two side-by-side promotional images for mobile games. The left image is for "PUBG MOBILE" and features a stylized illustration of a man's face with the words "PUBG MOBILE" written across it. Below this is a group of four men, one of whom has "FNATIC" on his shirt. The right image is for "PLAYERUNKNOWN'S BATTLEGROUNDS MOBILE" and shows a group of diverse characters standing together against a dramatic, fiery background.

NEWS

Fnatic sign Indian PUBG mobile team XSpark

David, 12 months ago | 0 | 1 min read | ⌂

susanshu.com



Roles in game development

- Narrative design, writing...
- Game programmer, Engine/Physics developer
- Producer, project coordinator...
- 3D artist, animator, concept artist...



Python helped me enter “indie” development

- Already use in my full-time job (machine learning)
- Great documentation
- Object oriented programming

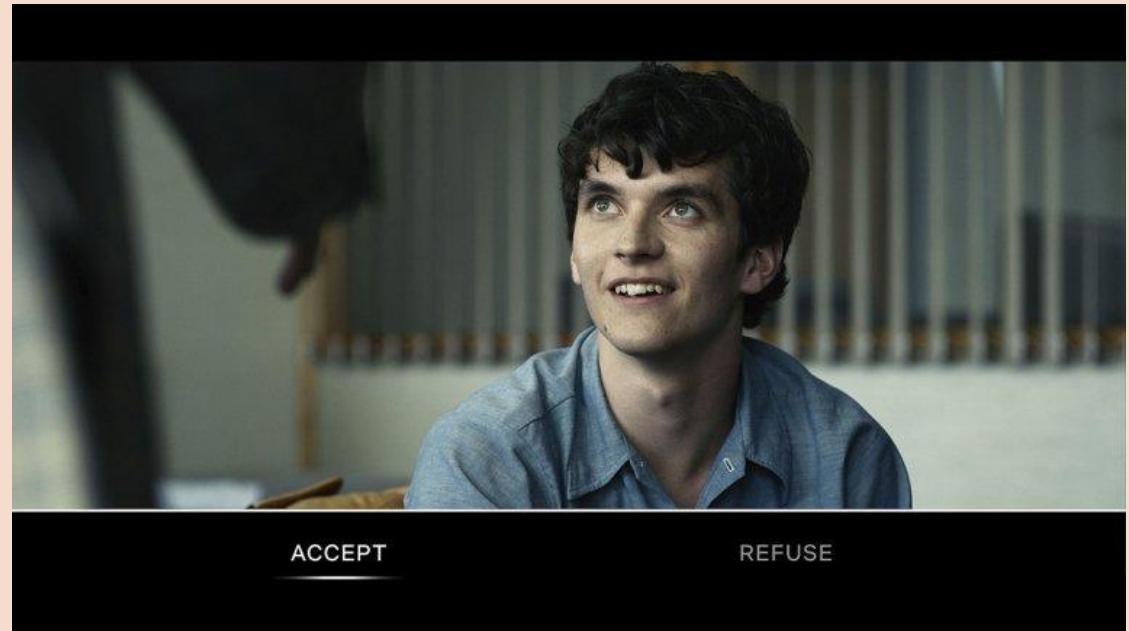
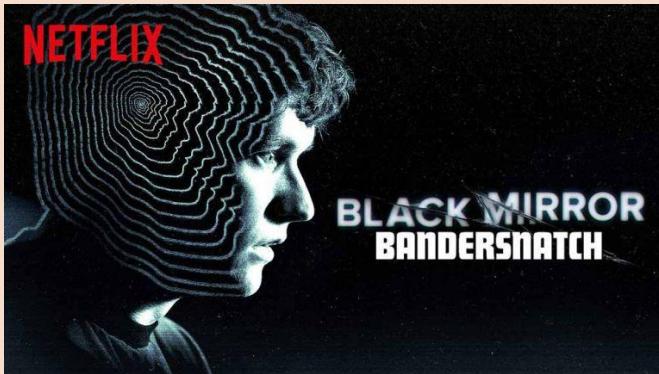


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“Narrative-driven” can be done many ways



“Narrative-driven” can be done many ways



“Visual novel” style narrative delivery is popular



Persona 5

Credit: Atlus USA

“Visual novel” style narrative delivery is popular



Danganronpa V3

Credit:
Spike Chunsoft

Difficult to build custom engine as solo dev

Custom engines are everywhere!



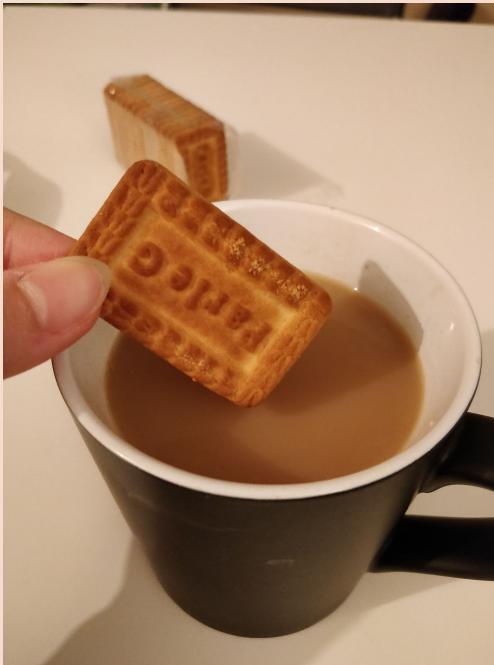
Difficult to build custom engine as solo dev

Custom engines are costly



Difficult to build custom engine as solo dev

Custom engines are everywhere!



Difficult to build custom engine as solo dev

Custom engines are costly



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Ren'Py is open source & high production

Games made in Ren'Py

- From NaNoRenO to high budget

[renpy / renpy](#)

Code Issues 123 Pull requests 10 Projects 1 Security Insights

The Ren'Py Visual Novel Engine <http://www.renpy.org/>

renpy visual-novel visual novel game engine python

9,274 commits 27 branches 438 releases 98 contributors

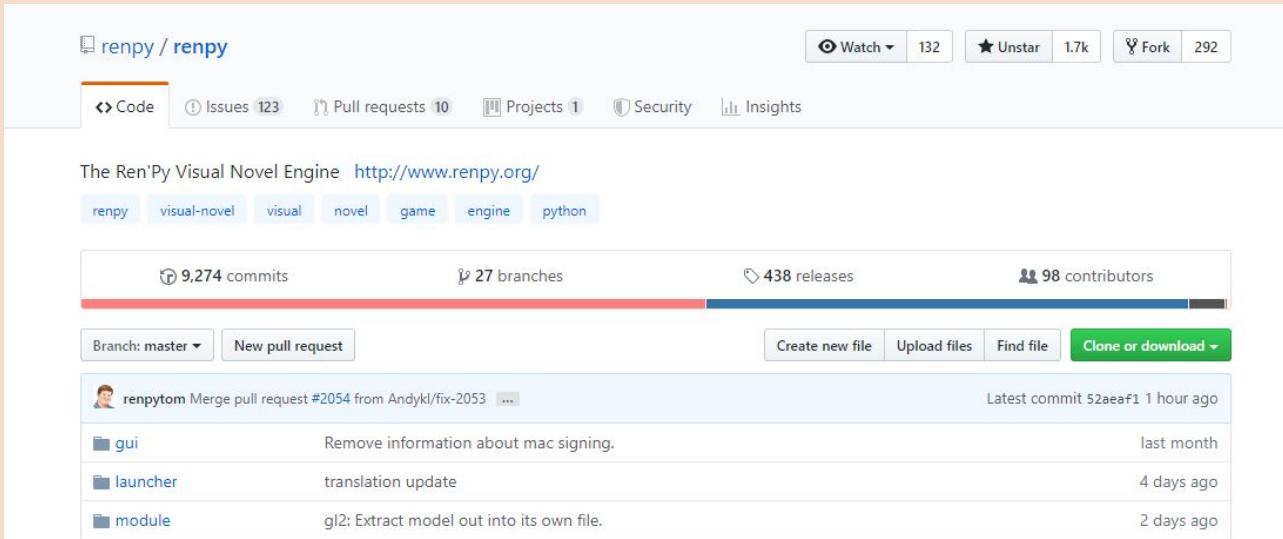
Branch: master New pull request Create new file Upload files Find file Clone or download

renpytom Merge pull request #2054 from Andykl/fix-2053 ... Latest commit 52aeaf1 1 hour ago

gui Remove information about mac signing. last month

launcher translation update 4 days ago

module gl2: Extract model out into its own file. 2 days ago



Ren'Py is open source & high production

Games made in Ren'Py

- From NaNoRenO to high budget
- PyTom's philosophy
 - “The best way to make visual novels, and give it away for free”



Ren'Py is open source & high production

Games made in Ren'Py

- From NaNoRenO to high budget
- PyTom's philosophy
 - “The best way to make visual novels, and give it away for free”
- OOP is standard in game development



Ren'Py is flexible - screen customization

Aside: Ren'Py has a Lexer for non-programmer friendly syntax

```
screen gallery:

# naming convention: "gal1" the number of
tag menu

add "gui/screen_gall.png"

imagebutton auto "gui/credits_%s.png":
    xpos gui.navigation_xpos
    yalign 0.25
    action [ Hide("gallery"), Jump("credit
```

Ren'Py Documentation Home Page Online Documentation



Creator-Defined Statements
Lint Utility Functions
Example

class Lexer

error(msg)
Adds a *msg* (with the current position) in the list of errors. This does not prevent further parsing.

require(thing, name=None)
Tries to parse *thing*, and reports an error if it cannot be parsed.
If *thing* is a string, tries to parse it using `match()` with no arguments. If *name* is not specified, the name of the thing will be used.

eol()
True if the `lexer` is at the end of the line.

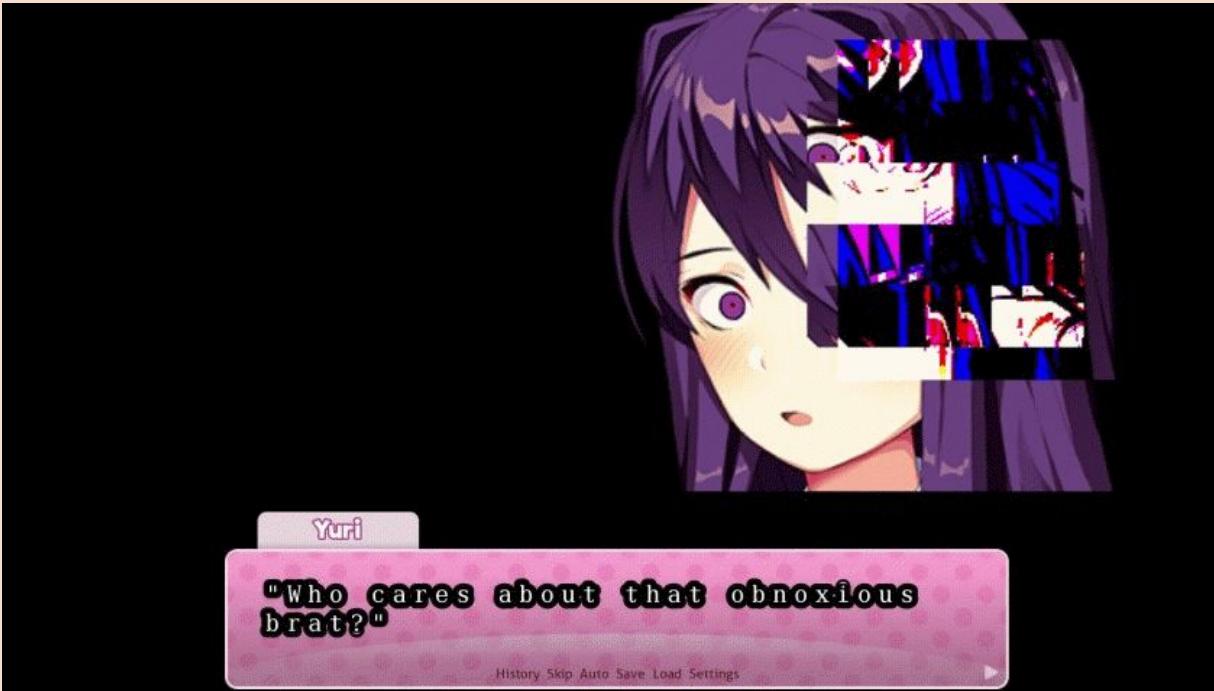
expect_eol()
If we are not at the end of the line, raise an error.

expect_noblock(stmt)
Called to indicate this statement does not expect to receive the message with an error.



Ren'Py is powerful - flexible visual effects

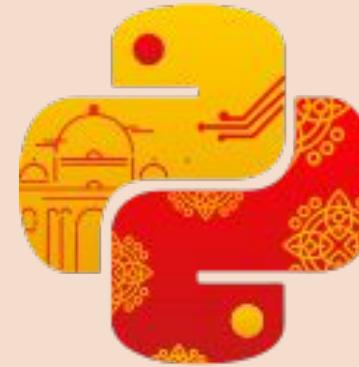
Doki Doki Literature Club



Credit:
Team
Salvato

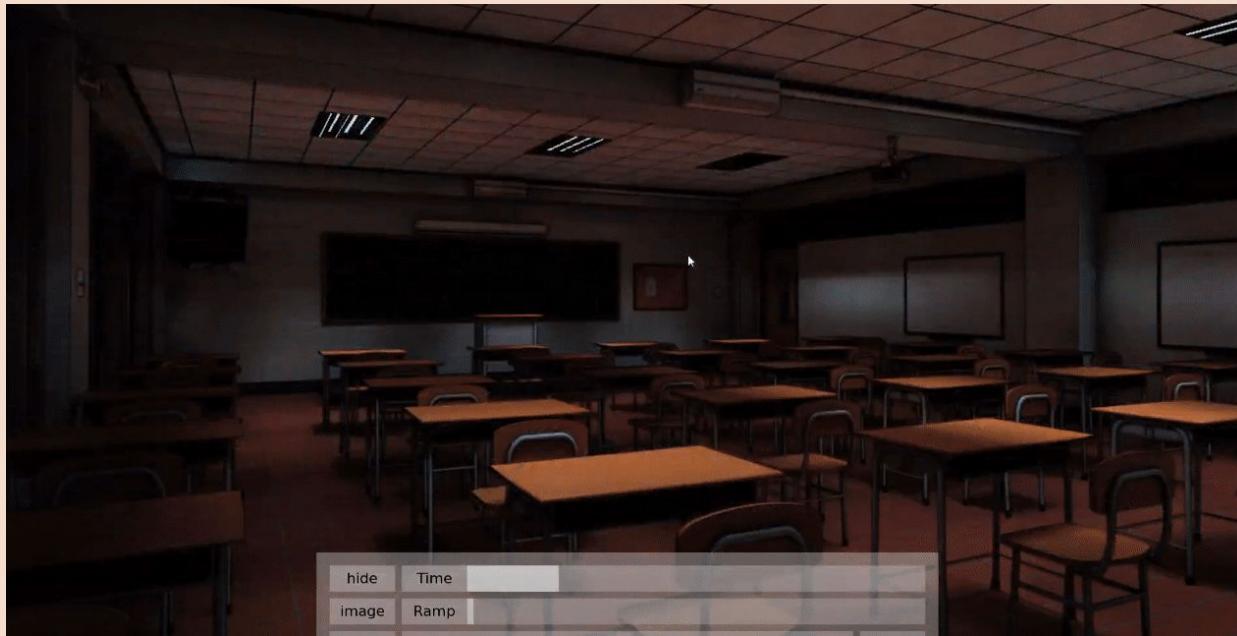
Ren'Py is powerful - flexible visual effects

- Add image and create transition
- Modify something in `ImageDissolve` class



```
1  init:  
2  
3      $ pycon = ImageDissolve("wipes/pycon_transparent_transition.png", 2.0, 8)  
4      $ dmg = ImageDissolve("wipes/dmg_transparent_transition.png", 2.0, 8)  
5  
6  label start:
```

Ren'Py is powerful - flexible visual effects



Video: Kia Azad

https://www.youtube.com/watch?v=h_8TGvSBCU8&ab_channel=KiaAzad

Ren'Py is powerful - complicated variables

Long Live the Queen

The image shows a screenshot of a Ren'Py game interface. On the left, there are two columns of stat bars. The top column is for Social skills, and the bottom column is for Physical skills. The right side features a menu with tabs for Skills, Mood, Outfit, Classes, Log, and Menu.

Social + 0.000

Royal Demeanor	- 2.00
Composure	0.0
Elegance	0.0
Presence	0.0

Intellectual + 0.125

History	- 2.00
Novan	0.0
Foreign Affairs	0.0
World	0.0

Intrigue

Intrigue	+ 1.00
Internal Affairs	0.0
Foreign Intelligence	0.0
Ciphering	0.0

Physical + 0.000

Agility	+ 0.00
Dance	0.0
Reflexes	0.0
Flexibility	0.0

Economics *

Accounting	- 0.75
Trade	82.6
Production	36.0

Military

Strategy	+ 1.00
Naval Strategy	0.0
Logistics	0.0

Mystical + 0.030

Faith	+ 0.30
Meditation	0.0
Divination	15.0
Lore	15.0

Skills

Mood

Outfit

Classes

Log

Menu



Ren'Py is powerful

Long Live the Queen



Credit: Hanako Games

Ren'Py is powerful

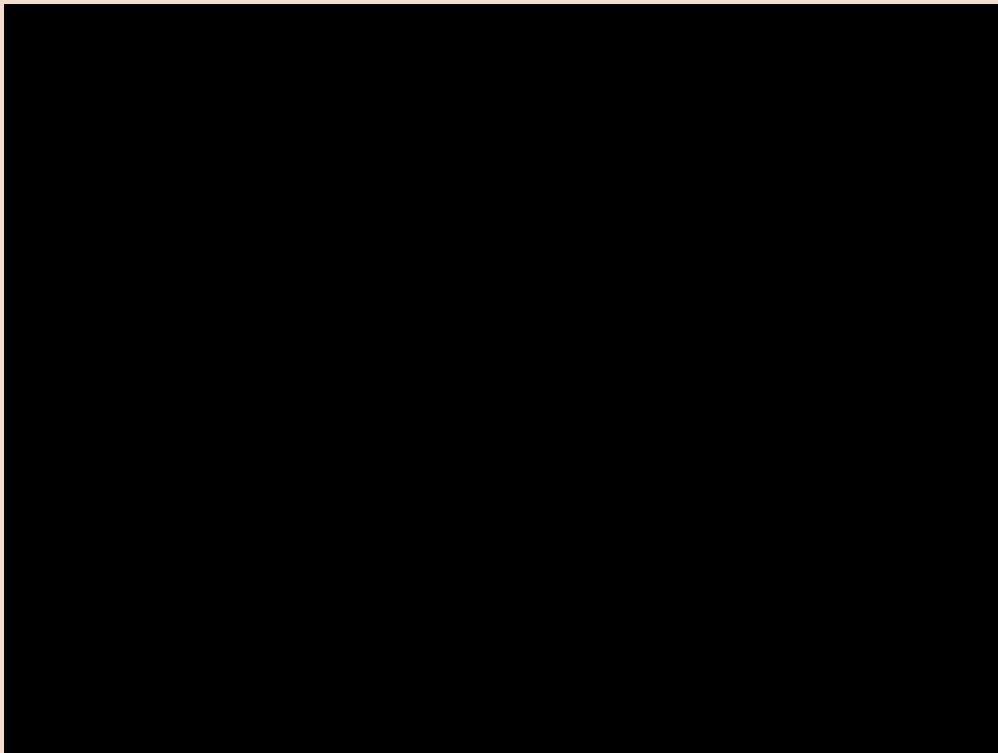


Highway Blossoms

- Ren'Py 3D

Credit: Studio Élan

Ren'Py is flexible - screen customization



Video:
npckc - a hero and a garden

Ren'Py is flexible



Ren'Py is flexible

```
import random
import time

class MenuTimer(object):
    start_time = 0.0

    def duration(self):
        return renpy.get_game_runtime() - self.start_time
```

Implement timer of how long player took to make decisions



Ren'Py is flexible

```
@property
def verbose(self):
    if renpy.in_rollback():
        return "If only I could turn back time?"
    else:

        d = self.duration()
        return "{} It took me {:.02f} seconds. {}".format(
            random.choice(
                ["Hmm.", "Interesting...", "Woah.", "Wonderful.",
                 "Strange.", "Huh."]))
```

Generates dialogue by randomly selecting and combining phrases



Ren'Py is flexible



Ren'Py is flexible



You could easily remake Netflix's Bandersnatch in Ren'Py.

(Its creator used Twine, a popular tool in the VN community, to code the script)

Your imagination's the limit with Ren'Py

“I can't make a high production quality visual novel!”

Low budget dev
+ Ren'Py



You only have to learn Ren'Py once

- New programmer friendly
- Flexible for seasoned devs
- Thank you RenPyTom, your vision did come true





A Summer With The Shiba Inu



Now go make your story-driven game!



Contact me



@quill_studios



Susan Shu Chang

susanshu.com



A Summer With The
Shiba Inu

