Date :- 26 May 2020 Name :- Poojary Sushant

Course :- Digital signal processing USN :- 4AL18EC400

Topic :- Fourier series, Laplace transform & Z Transform Sem :- 6th sem 'B' sec

Fourier Series & Gibbs Phenomena using Python

```
import numpy as np
import matplotlib.pyplot as plt
plt.rcParams['figure.figsize']=[8,8]
plt.rcParams.update({'font.size':18})
dx=0.01
L=2*np.pi
x=np.arange(0,L+dx,dx)
n=len(x)
nquart=int(np.floor(n/4))
f=np.zeros_like(x)
f[nquart:3*nquart]=1
A0=np.sum(f*np.ones_like(x))*dx*2/L
fFS=A0/2*np.ones_like(f)
for k in range(1,101):
    Ak=np.sum(f*np.cos(2*np.pi*k*x/L))*dx*2/L
    Bk=np.sum(f*np.sin(2*np.pi*k*x/L))*dx*2/L
    fFS=fFS+Ak*np.cos(2*k*np.pi*x/L)+Bk*np.sin(2*k*np.pi*x/L)
plt.plot(x,f,color='k',linewidth=2)
plt.plot(x,fFS,'-',color='r',linewidth=1.5)
plt.show()
```

laplace Transform [Matlab]

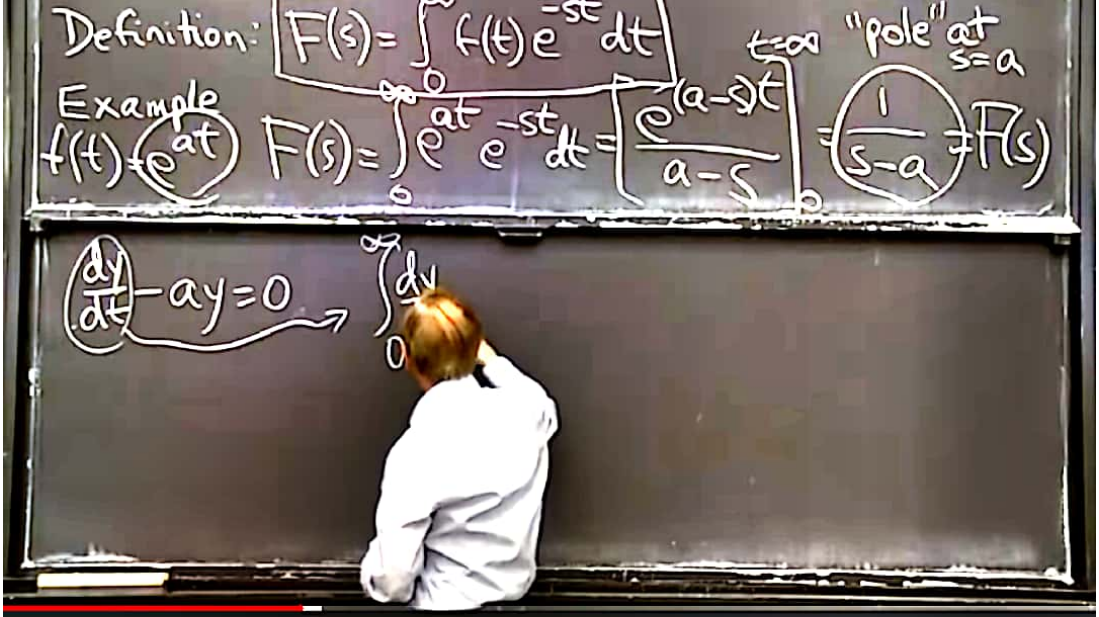
```
clear all;
close all;
syms Lft;
F= (exp(-3*t)*sin(3*t))/t
L= laplace(F)
```

Inverse laplace transform

```
clear all;
close all;
syms F,S,X;
F=(S+29)/(S^3+4*S^2+9*S+36)
ilaplace(F,X)
```

Z Transform Using Matlab

```
clear all;
close all;
syms n,w;
a= sin(w*n)
b= ztrans(a)
disp(b)
(z*sin(w))/(z^2-2*cos(w)*z+1)
Pretty(b)
```



Laplace Transform: First Order Equation

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"The purpose of a Laplace transform is to convert a differential equation into an algebraic equation." Well said, prof.

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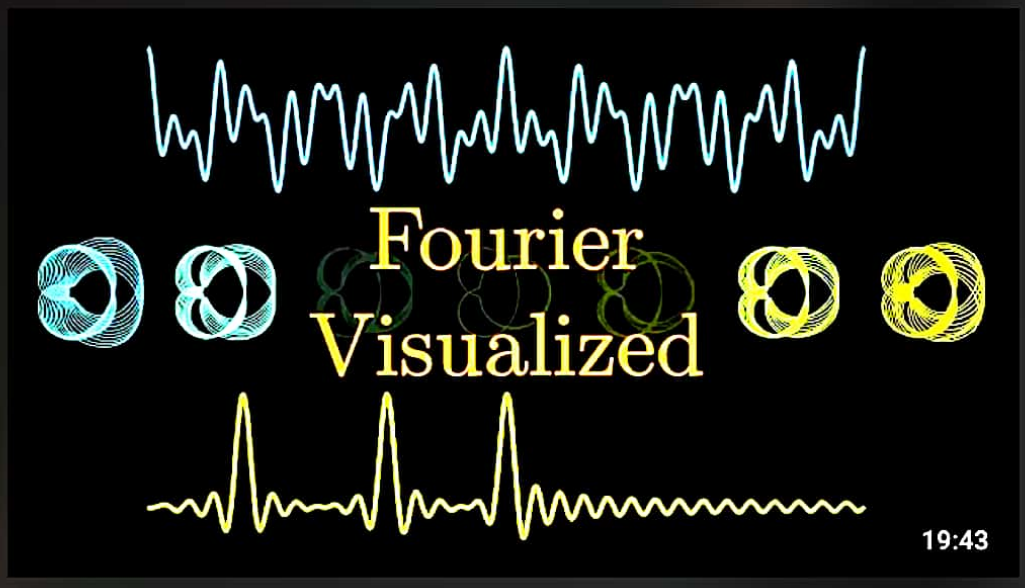

But what is the Fourier Transform? A visual introduction.
3Blue1Brown · 4.2M views · 2 years ago

Date:- 26 May 2020 Name:- Poojary Sushant

Course:- Python on Udemy USN:- 4AL18EC400

Topic:- Personal website with Python & Flask Sem:- 6th sem 'B' sec

script.py

```
from flask import Flask, render_template
app = Flask (__name__)
@app.route ('/')
def home ():
    return render_template ("home.html")
@app.route ('/about/')
def about ():
    return render_template ("about.html")
if __name__ == "__main__":
    app.run (debug = True)
```

home.html

```
{% extends "layout.html" %}
{% block content %}
<div class = "home">
    <h1> This is my home page </h1>
    <p> This is my test the website </p>
</div>
{% endblock %}
```

about.html

```
{% extends "layout.html" %}
{% block content %}
<div class = "about">
```

```
<h1> My about page </h1>
<p>This is a test website again </p>
<p> This was added later </p>
</div>
{% endblock %}
```

layout.html

```
<!DOCTYPE html>
<html>
  <head>
      <title> Flask App </title>
      <link rel="stylesheet"
href="{{url_for('static', filename='css/main.css')}}">
  </head>
  <body>
    <header>
      <div class="container">
        <h1 class="logo"> Sushant's web app </h1>
        <strong><nav>
          <ul class="menu">
            <li><a href="{{url_for('about')}}">about</a></li>
          </ul>
        </nav></strong>
      </div>
    </header>
    <div class="container">
      {% block content %}
      {% end block %}
    </div>
  </body>
</html>
```

udemy.com/course/the-python-mega-course

Udemy | The Python Mega Course: Build 10 Real World Applications

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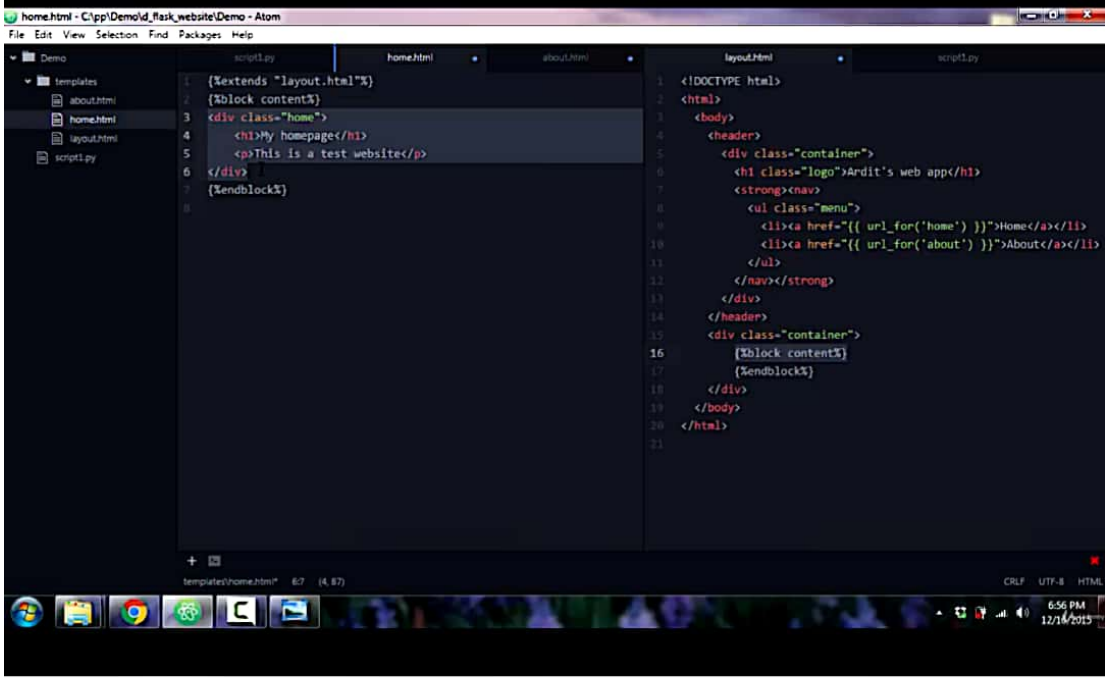

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