A Correlative Scrutiny on two Programming Dialects: RUBY Vs PYTHON

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Abstract: ***The two most dominant rising programming dialects in reality, Ruby and Python have many features in common. High-level object-oriented coding, interactive shell, standard libraries, persistence support are some of the common features of Python and Ruby. However, both vary in their approach to solve problems because of their syntax and uses. Power of a language is based on the libraries and popularity defines the frameworks that have been used. This research paper primarily focuses on the frameworks and libraries of Ruby and Python. Ruby on Rails is one of the most powerful framework of Ruby and Django for python. Python is used for many purposes beyond web development such as data science and machine learning computations. A spike in popularity is seen for both Ruby and Python but still the question of "which to be opted" for developing an application becomes a query most of the times. Hence, this research scrutinizes both Ruby and Python in terms of framework and libraries.***

Keyword: Power of Python, Power of Ruby, Comparison of frameworks, Comparison of libraries.

I. INTRODUCTION

Python and Ruby are two ground-breaking open source programming [1][3] dialects today. Python is an elegant high level programming [7]19] language with the OOPS concept and broadly used prominent programming language utilized nowadays [38]. It was developed by Guido-Van-Rossom in twentieth February1991 (Labeled variant is 0.9.0) [6], [23]. "There is only one 'best' way to do something, and that is how it should be done" is the Python philosophy. Tat is [2] Python is quite simple and code less dynamic language [12] with a completely unique syntax which improve the readability. It helps the programmers for rapid software development and reduce the time and cost of the development. Additionally, Python is wealthy in [14] libraries and it results in creating packages in a clean manner inside a quick time period. Python is used for creating internet applications, to carry out complicated clinical calculations, software development [28], and for system [10] scripting. Additionally, the center zone of a Python is Web development and Data Analytics [2],[22],[35],[36]. On the other hand, In 21st December-1995 a Japanese household newsgroup authoritatively reported first form of Ruby(labeled rendition is 0.95) developed by Yukihiro Matsumoto. Ruby is solely an Object oriented, general purpose programming language [15]. It is totally an open source [16] language which is written in C that got encouraged by using Perl, Lisp, Smalltalk, Eiffel, Basic, and Ada. Today Ruby has grown to be one of the most popular web development language using Ruby on rails.

There is more than one way to do the same thing (Ruby principle) which interprets [13] as Code flexibility which is one of the major advantage of Ruby [41]. Programmer can define their on syntax for coding. It makes programming more fun which results in its popularity among programmers [30]. Python and Ruby are two competing programming languages today. Both languages are similar and at the same time they have their own uniqueness [23][28]. Ruby and Python [5],[8] works on distinctive platform inclusive of Mac OS, Windows and various versions of linux [26][27]. Any person with an English expertise can easily go with these two languages without a deep know-how in coding. Hulu, AngelList, GitHub, airbnb are some of the common organizations which use Ruby [25], [39]. [15] Robotics, networking, gadget management, protection, and 3-D modeling are some of the famous Ruby used areas [26]. Google[37], YouTube, Pinterst, Dropbox, Instagram, Spotify etc are some of ongoing users of Python.

II. RELATED WORK

A. Popularity

As per a review from Github(Octoverse 2018), among the top 10 programming languages [34], Ruby is decaying from fifth place (2014) to tenth place(2018). However, Python has steadily kept its popularity, moving from the fourth most used language in 2014 up to the third spot in 2015,where it remained through 2018

B. Learning curve

Python is a "quick to learn" programming language. The syntax is easier to understand, and it's easier for beginners [24]. But beyond that, you're going to need to make decisions on what framework to use beyond bare-bones Python.

Ruby might take more time to get used to, but Ruby on Rails has Plagiarism Check built-in features—like scaffolding and Active Record—to accelerate development. As soon as you know them, you'll be [38],[41] able to build an application with API access in a matter of minutes.

C. Reusable code

Publicly available and ready-to-use code is a relevant factor when you need to decide on a programming language. Python calls them "modules," and they're available via PyPI where you can search more than 150,000 modules. On the other hand, reusable code in Ruby is called Gems, and there are close to 150,000 gems. But the differentiating factor is filtering; PyPI allows filtering by categories like "development status," which is more straightforward than

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comparing many libraries and manually evaluating their code.

D. Flexibility

In this aspect, Ruby has inherited Perl's philosophy: "There's more than one way to do it." This will always find many different methods to achieve a task in Ruby . Depending on who's writing the code, this might lead to unnecessary complexity and obfuscation.

On the other hand, Python follows an approach [34] where simplicity has more value than complexity ("The Zen of Python") Hence its philosophy is "There should be one and preferably only one—obvious way to do it." So, although Python code probably won't be the most flexible, it has a good chance of being more readable to an inexperienced [33] programmer .

E. Job opportunities

According to an inquiry by a popular job site indeed.com, more than 55,000 jobs are available in the USA for professionals who are having expertise in the Python. Around 41 big companies across the globe have deployed Python as their main language of programming in a short span of time. Big companies such as Google, Netflix, Reddit, Pinterest, Dropbox, SlideShare, YouTube, Facebook and Quora have adopted Python and do most of their coding in the Python. In the world of developers, the open secret is that Google also uses Python as its second language of coding and also plan to use this language in the near future for the offerings of its new products

	Ruby		
No	**Framework**	**Last release**	**Repository**
1	Ruby on rails Version -5.2.3	2019-04-24	rubygems
2	Rack Version-1.5.2	2019-04-02	rubygems
3	Sinatra Version -2.0.5	2018-12-22	rubygems
4	Padrino Version-0.14.4	2018-11-05	rubygems
5	Roda Version-3.22.0	2019-07-12	rubygems
6	Hobo Version-1.5.1	2016-05-07	rubygems
7	Cuba Version - 7.0	2018-01-17	rubygems
8	merb-core Version-1.1.3	2010-07-10	rubygems
9	Ramaze 2012.12.08	2012-12-08	rubygems
10	Hanani Version -2.0.0	2019-01-30	rubygems
11	Vanilla Version-2.1.0	2016-07-05	rubygems
12.	Camping Version - 1.5	2013-03-21	rubygems
13	Strelka Version -0.15.0	2017-06-14	rubygems
14	Cramp Version -0.15.3	2014-04-29	rubygems
15	Rango Version -0.2.6	2010-10-03	rubygems
16	Plezi Version-0.16.4	2019-02-22	rubygems
17	Bats Version-0.2.1	2015-08-08	rubygems
18.	Scroched Version-1.0.0	2018-11-15	rubygems
19.	Marley Version-0.8.4	2012-04-03	rubygems
20.	Renee Version -0.3.11	2012-03-04	rubygems
21.	Pakyow Version-1.0.1	2019-07-16	rubygems
22.	Gin Version-1.4.0	2014-03-13	rubygems
23.	Lattice Version -1.0.30	2013-10-01	rubygems
24.	Harbor Version -0.16.1	2009-11-22	rubygems
25.	Raptor Version -0.21	2011-09-22	rubygems

III. COMPARISON OF FRAMEWORKS

Frameworks is an empty platform for developing static and dynamic pages. It's a group of libraries and predefined instructions which assist to lessen the work load and time of a software developer. It is reusable and extensible platform with most recent technology and pattern [32]. A developer can add new functionality on every occasion he needs based totally on their necessities. Frameworks [9] always keep a fashionable course for growing and deploying programs with a re-usability mode. Here, in case of Python and Ruby they have got a massive series of frameworks in special regions. Django, Web2Py, Flask, Bottle, CherryPy are [20],[22] some of well-known frameworks of Python. Ruby on Rails, Hanani, Sinatra, Cuba and Nancy are some of well-known Ruby frameworks[42],[43],[44],[45]. Table 1 show the listing of top 25 frameworks of Ruby and Python.

Python		
Framework	**Last release**	**Repository**
Aiida Version - 0.12.3	2019-03-03	PyPI
AsyncIO Version - 3.4.3	2015-03-10	PyPI
Bob Version - 6.0.0	2019-07-01	PyPI
Bottle Version - 0.12.17	2019-06-23	PyPI
Castle CMS Version -1.0.4	2019-01-03	PyPI
Chandler Version - 0.1.0	2015-04-29	PyPI
CherryPy Version - 18.1.2	2019-06-23	PyPI
CubicWeb Version-3.26.12	2019-07-02	PyPI
Django Version - 2.2.3	2019-07-01	PyPI
Flake8 Version - 3.7.8	2019-07-08	PyPI
Flask Version - 1.1.1	2019-07-08	PyPI
Hypothesis Version -4.28.2	2019-07-14	PyPI
IPython Version - 7.6.1	2019-07-03	PyPI
Jupyter Version - 1.0.0	2015-08-12	PyPI
Lektor Version - 3.1.3	2019-01-27	PyPI
Masonite Version - 2.2.6	2019-07-05	PyPI
Nengo Version - 2.8.0	2018-01-10	PyPI
Robot-nps Version - 1.0.0	2014-07-31	PyPI
Paste Version - 3.0.8	2019-03-07	PyPI
Pelican Version - 4.1.0	2019-07-14	PyPI
Plone Version - 5.2.0	2019-07-11	PyPI
Pylons Version - 1.0.3	2018-01-12	PyPI
Pyramid Version - 1.10.4	2019-04-16	PyPI
Pytest Version - 5.0.1	2019-07-05	PyPI
TurboGears Version - 1.5.1	2011-11-27	PyPI

IV. COMPARISON OF LIBRARIES

Library is a set of predefined operations or code to perform an activity while it's far invoked. It is a non-volatile reusable characteristic that decide the overall performance of a language. A language

having a terrific library [8],[40] help will certainly flip to a strength complete language. Because library is a fundamental building block of coding. There are exclusive libraries available for different motive [31], one of the principal benefit of using library is that it will lessen the duration of program, complexity of code and it ends in get entry to maximum readability. In-case of Python [4],[17] and Ruby, they have got a terrific library support. Both of them have one-of-a-kind package manager
for their help. Ruby gem is a package deal supervisor for Ruby programming language and pip for Python.

The following table that shows which language is far better. Because libraries represents the power of a language. Here represents more than eighty categories of libraries for both Python and Ruby. Among them fifty categories are common and remaining are similar once. Their are number of inbuilt and libraries are consolidated in all categories. Most of the libraries are available in Gems for Ruby and Pip for Python, these are the official repository for installing libraries. We can install python libraries by using the following command *pip install libraryname* and we can use *gem install [gem] for install gem package.* These comparison represents using the following table.

	Ruby		Python	
No	**Libraries**	**Supported libraries**	**Libraries**	**Supported libraries**
1.	Admin Interface	ActiveAdmin, ActiveScaffold, Typus Adminstrate, bhf, Trestle,RailsAdmin,	Admin Panels	Ajenti, django-grappelli, django-jet, django-suit, django-xadmin, flask-admin, flower, wooey
2.	Authenticatio n and oauth Authorization	Authlogic,Clearence,Device, JWT, Knock ,Monban, OminiAuth, Rodath,Sheild,Sorcey,warden ,OA uth(Doorkeeper,OAuth2),Authoriz ation,	Authentication	**OAuth** (authlib, django-allauth, django oauth2, python-social-auth) **JWT**(pyjwt,python-jose, python-jwt)
3.	Caching	Actioncaching for Action Pack, Dalli,Garner,IdentityCache,Kashmi r,Readthis, Reord Cache,	Caching	Beaker,django-cache-machine,python-diskcache ,django-cacheops,dogpile.ca che, HermesCache, pylibmc,
4.	Code analysis and metrics	Barkeep,Brakeman,Cane,Sorbet, Coverband,Fasterer,Flay,Scientist, FLog,fukuzatsu,MetricFu,Reek, Pippi,rails_best_practices,Pronto,R uboCop, Rubycritic, SimpleCov, Traceroute	Code Analysis	**Code Analysis** (coala, code2flow, prospector, pycallgraph)**Code Linters** (flake8, pylint, pylama)**Code Formatters** (black, yapf) **Static Type Checkers** (mypy, pyre-check) **Static Type Annotations Generators**
5.	CLI Builder	Clamp,cmdparse, Commander, GLI,Hanami CLI, Main, Optimist, Rake,Slop,Terrapi,Thor, TTY	Commandlin eInterface Development	Command-line Application Development(cement, click, cliff, clint, docopt, python-fire, python prompt-toolkit)Terminl,Rendering
6.	CLI Utilities	Awesome Print, Betty, colorize, coloris, formatador, Paint,Tabulo Pastel,Ru, Ruby/Preogressbar, TablePrint,cTerminal,Table,	Command-line Tools	Productivity (cookiecutter, doitlive, howdoi,PathPicker,percol, thefuck, tmuxp, try) CLI Enchancements (httpie, kube-shell, mycli, pgcli, saws)
7.	Concurrency and parallelism,	Celluloid, Concurrent Ruby, forkoff, EventMachine,Parallel,	Concurrency and Parallelism	Concurrent.futures, multiprocessing, eventlet, gevent, uvloop, scoop
8.	Configuration	Champer,Cofigatron, Configs, detenv,Econfig, ENVied, Figaro,Global,Sail RailsConfig,	Configuration	configobj, configparser, profig, python-decouple
9.	Data visualization	Chartkick,GeoPattern,LazyHighCh art, RailRoady, Rails Erd, Ruby/GraphViz	Data Visualization	Altair,Bokeh,bqplot,Dash(awesome-d ash),ggplot,Matplotlib,Pygal,PyGraph viz,PyQtGraph,Vispy, Seaborn,
10.	Database drivers	Cassandra Driver,Data Objects,TinyTDS, mongo-ruby-driver, mysql2,Neography,Redic,	Database Drivers	**Mysql ,PostgreSQL, OtherRelationalDatabases,NoSQL Databases,Asynchronous Clients**
11.	Database Tools	Connection_pool, Database Cleaner, Foreigner,Large Hadron Lol DBA, Polo, PgHero, Rails DB, Sencic, SchemaPlus, Seed dump, Upsert, Migrator,	Database	tpxipckosletgDrBes,, ttinxRydebd,ixZ)ODB

25.	HTTP clients	Excon,Faraday,DeviceDetector, Http Client, HTTP, HTTPX, httparty, Http-2,Patron,Sniffer, RESTClient, Savon,Sawyer,	HTTP Clients	grequests, httplib2, requests, treq, urllib3
26.	Image processing	MiniMagick, Phasion, PSD.re, RMagick, ruby-vips, Skeptick	Image Processing	hmap, imgSeek, nude.py,pagan,pygram, pillow,pyBarcode,Quads,python-qrcode
27.	Implimentations/ Compilers	JRuby, MRuby, Opal, Rubinius, TruffleRuby	Implementations	CPython,Cython,Numba,Pyston,Grumpy,IronPython,MicroPython Pyjion,PyPy, ,Python,Stackless CLPython,Jython,PeachPy,
28.	Internationalization	FastGettext,Globalize,128n-tasks, i18-n, rails-i18-n,r18n,TermitTolk, twitter-cldr-rb	Internationalizations	Babel, PyICU
29.	Logging	Cabin,Fluentd,HttpLog,Log4r,Logging, Lograge,MongoDB Logger, Scrolls, Semantic,Logger, Syslogger, Yell	Logging	Eliot, logbook, logging, raven
30.	Machine learning	A14R,AwsomeMachineLearnin with Ruby, weka PredictionlO Ruby SDK, rb-libsvm, ruby-fann, rumale,	Machine Learning	H2O, Metrics,NuPIC, scikit-lear SparkML-Apache vowpal_porpoise, xgboostn,Spark,
31.	Music Sound and	Coltrane, Maestro, play, Sonic Pi	Audio	**Audio**(audioread, mingus, pyAudioAnalysis, TimeSide) **Metadata**(beets,mutagen, tinytag) dejavu, pydub, eyeD3,
32.	Natural language processing	AwesomeNLPwithRuby,Text Treat Parslet,Treetop,pocketsphinx-ruby,Pragmatic Segmenter, Ruby Natural Language Processing Resources, , , Words Counted	Natural Language Processing	**General** (gensim, langid.py, nltk, pattern,polyglot, pytext, PyTorch-NLP, spacy, stanfordnlp) **Chinese**(jieba,pkuseg-python,snownlp, funNLP
33.	Networking	Dnsruby, RubyDNS	Network Virtualization	mininet, pox
			Networking	asyncio (awesome-asyncio), pulsar, pyzmq, Twisted, napalm
34.	ORM/ODM	ActiveRecord, DataMapper, Hanami::Model, Mangoid, MongoMapper, MongoModel, Neo4j.rb, NoBrainer, Ohm, Perpetuity,Redis-Objects, ROM, Sequel	ORM (Object Relational Mapping)	**Relational Databases** (Django Models, SQLAlchemy, dataset, orator, peewee, pony, pydal) **NoSQL Databases**(hot-redis, mongoengine, PynamoDB, redisco)
	ORM/ODM Extentions	**Auditing and Versioning** (ActsAs Paranoid, Audited, Destroyed At, Discard, Espinita, Logidze,Paranoia, marginalia, mongoid-history,Paper Trail,PermenantRecods) **Import** (ActiveImporter,Active Record Import, bulk_insert, data_miner, ferry)**Misc**(ActiveRecord::Turntable,ActiveValidators,DeepPluck, numerize,Goldiloader, mini_record) **Multi-tenancy**(ActsAsTennant, Apartment, Milia)**Social**(Acts As Commentable, Acts as Commentable with Threading, acts_as_follower,ActiveRecordReputation System,Votable, Merit, Set,Closure Tree,)		

35.	Package management	**Gems**(Bundler,RubyGems ,Clouds mith) **Package and Applications** (Berkshelf, CocoaPods, fpm, Linuxbrew, Homebrew-cask, Homebrew, Traveling Ruby)
36.	Processes	childprocess, posix-spawn
37.	Queues and Massaging	Backburner, Bunny, Delayed::Job, Gush,Karafka, MarchHare, Reque, Que, RocketJob, Shoryuken, Sidekiq, Sneakers, Sucker Punch
38.	Rails Application Generators	Bootstrappers, Hobo, orats, Rails Composer, Raygun, Suspenders
39.	Robotics	Artoo(Arduino, LeapMotion, Pebble, Raspberry Pi
40.	Serverless	FaaStRuby, Jets
41.	Scientific	**Bindings** (Pycall, ruby-opencv) **Classifiers** (classifier-reborn, stuff-classifier) **Dataanalysis/ structures** (daru, Daru::View, Rgl) Numerical Arrays(Nmatrix, Numo::Narray, mdarray)**SciRuby** (Iruby,statsample,statsample-timeseries, statsample-glm, distribution, minimization, rb-gsl) **Specific** (BioRuby, bloomfilter-rb, decision tree) **Utilities** (algorithms, jaro_winkler, primes-utils, Roots, smarter_csv)
42.	Search	Chewy, elasticsearch-ruby, elastics, has_scope, Mongoid Search, pg_search, ransack, Rroonga, scoped_search, SearchCop, Searchkick, Searchlogic,Sunspot, textacular, Thinking Sphinx
43.	PDF	CombinePDF,Gimli, HexaPDF, InvoicePrinter,Kitabu, Pdfkit, Prawn,Rghost, Shrimp, Wicked Pdf, Wisepdf,Squid,
	Presentation Programs	Slide Show
	Spreadsheets and Documents	AXLSX,Docsplit, Roo, Spreadsheet Architect, Yomu
44.	Static Site Generation	HighVoltage,Jekyll(Awesome Jekyll), Middle Nanoc, Photish, webgen man, Octopress,
45.	Template Engine	Curly,Haml, Liquid, Mustache, Slim, Tilt

35.	Package management	**pip** (PyPI, pip-tools), **conda**
36.	Processes	delagator.py, sarge, sh
37.	Queues and Massaging	celery, huey, mrq, rq
38.	Rails Application Generators	**Django**(django-rest-framework,django-tastypie),**Flask**(eve,flask-api, Flask-restful,flask-restless)**Pyramid**(cornice)**Frameworkdagnostic**(apistar,falcon,hug,restless,ripozo,sandman)
39.	Robotics	PythonRObotics, rospy
40.	Serverless	SimpleJSONRPCServer, SimpleXMLRPCServer, zeroRPC
41.	Scientific	Astropy, bcbio-nextgen, bccb,Biopython, cclib, Colour, NetworkX, NIPY, NumPy, Open Babel, ObsPy, PyDy, PyMC, QuTip, RDKit, Scipy, statsmodels, SymPy, Zipline, SimPy
42.	Search	Elasticsearch-py, elasticsearch-dsl-py, django-haystack, pysolr, whoosh
43.	Specific formats processing	**General**(tablib) **Ofiice**(openpyxl, pyexcel, python-docs, python-pptx, unoconv, XlsxWriter, xlwings, xlwt/xlrd)**PDF**(PDFMiner, PyPDF2, ReportLab,)**Markdown**(Mistune, Python-Markdown,**YAML**(PyYAML),**CSV**(csvkit) **Archive**(unp)
44.	Static Site Generation	Mkdocs, pelican, lektor, nikola
45.	Template Engine	Jinja2, Genshi, Mako

46.	Testing	**Fake Data** (Fabrication, factory_bot,FakePerson, faker,ffaker, Forgery, Machinist) **Mock**(ActiveMocker, DuckRails, TestXml, WebMock) **WebDrivers** (Selenium WebDrver, API Taster, Poltergeist, Watir) **Extra** (Appraisal, gitarro,Knapsack, mutant,Parallel Tests,power_assert, Ruby-Jmeter, Spring, timecop, vcr, Zapata)
47.	Third- party APIS	Discordrb, Dropbox, facy, fb_graph2,flickr,gitlab, google-api-ads-ruby,gmail, hipchart-rb, instagram-ruby-grm, itunes_store_transport, linkedin, Octokit, Pusher, Restforce, ruby-gmail, ruby-trello, simple-slack-bot, Slack Notifier, Slack rubygem, soundcloud-ruby ,terijira, tweetstream, twilio-ruby, twitter, wikipedia, Yt
48.	Video	Streamio FFMPEG, Video Transcoding
49.	Web crawling	Anemone, LinkThumbnailer, Mechanize, MetaInspector, Upton, Wombat
50.	Web socket	AnyCable, Faye, Firehose, Slanger, RenderSync, Websocket-Rails

46.	Testing	Test Runners(green, mamba,tox) GUI/Web Testing (locust, PyAuto GUI, Selenium,sixpack, splinter) Mock(mock, doublex, freezegun, httmock, httpretty, mocket, responses, VCR.py) Object factories (factory_boy,mixer, model_mommy)Code Coverage (Coverage)Fake Data(mimesis, fake2db, faker, radar)
47.	Third- party APIS	Apache-libcloud, boto3,django-wordpress, facebook-sdk, google-api-python-client, gspread, twython
48.	Video	moviepy, scikit-video,
49.	Web crawling	Cola, feedparser, grab, MechanicalSoup, pysider, robobrowser, scrapy, portia,
50.	Web socket	Autobahn-python, crossbar, django-channels, django-socketio, WebSocket-for-Python

Special libraries of Ruby and Python

	Ruby		
	No	**Libraries**	**Supported libraries**
51.	1.	Abstraction	ActiveInteration,Apotomo, Cells, Decent Exposure, Docile, dry-rb, Interator, Light service, Mutations, RES, Responders,
52.	2.	Analytics	Ahoy, Analytical,Gabba, Impressionist, Legatto, Rack::Tracker, Staccato
53.	3.	API builder and discovery	ActiveModel::Serializers,jsonapi-rb,versionist,Resource Jsonite, Pliny, rabl, Rails::API, Roar,Cake, Blanket, Crepe, Fast JSON API, Grape, Her, jbuilder, jsonapi-rb,versionist, JSON API::ResourceJsonite,Pliny,rabl,Rails::
54.	4.	Assets	Emoji, LessRails,Less, Rails Bourbon,bower-rails, Emoji,

	Ruby		
	No	**Libraries**	**Supported libraries**
51.	1.	Algorithms and Design Paatterns	algorithms, PyPattyrn, python-patterns, sortedcontainers
52.	2.	Build Tools	Bitbake, buildout, PlatformIO, pybuilder, SCons
53.	3.	Built-in Classes Enhancement	dataclasses, attrs, bidict, Box, Dotted Dict,
54.	4.	CMS (Content Management Systems)	wagtail, django-cms, feincms, Kotti, mezzanine, plone, quokka

55	5.	Automation	Danger, Huginn
56	6.	Captchas and anti-spam	Invisible Captcha, Rakismet, reCAPTHA, Voight-Kampff
57	7.	Cloud	AWS SDK for Ruby, Fog, browse-everything,
58	8.	CMS	Alchemy CMS, Camelon CMS,ComfortableMexicanS ofa, Fae, Locomotive CMS, Publify, PushType, Radiat,RefinaryCMS ,Spin, CMS, Storytime
59	9.	Code highlighting	CodeRay, pygments.rb, Rouge
60	10.	Coding style guides	Best-Ruby,fast-ruby, Fandamental Ruby, Rails style guide, RSpec style guide, Ruby Operators, Ruby style guide
57	7.	Cloud	AWS SDK for Ruby, Fog, browse-everything,
58	8.	CMS	Alchemy CMS, Camelon CMS,ComfortableMexicanSofa,Fae,LocomotiveCMS,Publify,PushType,Radiat,RefinaryCMS, Spina CMS,
59	9.	Code highlighting	CodeRay, pygments.rb, Rouge
60	10.	Coding style guides	Best-Ruby,fast-ruby, Fandamental Ruby, Rails style guide, RSpec style guide, Ruby Operators, Ruby style guide
61	11.	Core Extention	ActiveSpport,Addressable, Finishing Moves, Hamster, Hanani::Utils, Ruby Facets, ActiveAttr, FastAttributes, Virtus,Hashie
62	12.	Country data	Carmen, Countries, i18n_data, normalize_country,Phonelib , Phony, validates_zipcode
63	13.	CRM	Fat Free CRM
64	14.	Cryptocurrencies and blockchain	Blockcahin Lite, Peatio
65	15.	Dashboard	Blazer, Smashing, Dashing-Rails
66	16.	Data processing and ETL	Kiba
67	17.	Decorators	Draper, ShowFor

55	5.	ChatOps Tools	errbot
56	6.	Compatibility	python-future, python-modernize, six
57	7.	Computer Vision	OpenCV,pytesseract, SimpleCV
58	8.	Cryptography	cryptography, paramiko, passlib, pynacl
59	9.	Data Analysis	Blaze,OpenMining, Orange, Pandas, Optimus
60	10.	Data Validation	Cerberus,WebSocket,Autobahn-python,crossbar,django-channels, django-socketio, WebSocket -for-Python colander,jsonschema,
57	7.	Deep Learning	caffe, keras, mxnet, pytorch, SerpentAI, tensorflow,
58	8.	Distributd computing	BatchProcessing (PySpark-Apache Spark, dask, luigi, mrjob, Ray) Stream Proccessing (faust, streamparse)
59	9.	Code highlighting	CodeRay, pygments.rb, Rouge
60	10.	Downloader	s3cmd, s4cmd, you-get, youtube-dl
61	11.	Editor Plugins and IDEs	**Emacs** (elpy), **Sublime Text**(anaconda, SublimeJEDI) **Vim Visual Studio**(PTVS) **Visual StudioCode**
62	12.	ForeignFunction Interface	cffi, ctypes, PyCUDA, SWIG
63	13.	Functional programming	Coconut,CyToolz, fn.py, funcy,Toolz
64	14.	Cryptocurrencies and blockchain	Blockcahin Lite, Peatio
65	15.	Data Validation	Cerberus,WebSocket,Autobahn-python,crossbar,django-channels, django-socketio,
66	16.	Code highlighting	CodeRay, pygments.rb,
67	17.	Tools	pybuilder,Bitbake, buildout, PlatformIO,

68.	18.	Diff	Diffy, gendiff, JsonCompare
69.	19.	Ebook	Bookshop, Eeepub, Gepub, Git Scribe, Mobi, Review
70.	20.	Encryption	Bcrypt-ruby, RbNaCl, Sym,SymmetricEncryption
71.	21.	Error handling	Airbrake,Better,Errors, Bugsnag,Errbit,Exception Handler,Exception Notification,Honeybadger, Nesty, Raven Ruby
72.	22.	Feature flippers and A/B testing	Motherhead,flipper, Rollout, Split, Vanity,
73.	23.	Gem generators	Gemsmith, Hoe
74.	24.	Git tools	Ginatra,git-auto-bi ect, git _reflow, git-spelunk, git-up, git-whence,GitCop,
75.	25.	Graphql	graphql-batch,graphql-c lient, graphql-guard,
76.	26.	IRB	Clipboard,Hirb,irbtools, Looksee, Pry, rib
77.	27.	Markdown processors	Kramdown,Redcarpet,w ord-to-markdown
78.	28.	Measurements	Measured, Ruby Units
79.	29.	Mobile development	Dryrun,fastlane, Ruboto, RubyMotion,Ruby Push Notifications, Rpush, webpush
80.	30.	Money	Eu_central_bank,Moneitize, Money
81.	31.	Navigation	Active_link_to, Breadcrumbs on Rails,Gretel,loaf, Simple Navigation
82.	32.	Optimization	Bootsnap, fast_blank, yajl-ruby
83.	33.	Rails Application Generators	Bootstrappers,Hobo,orats, RailsComposer,Raygun, Suspenders,RoboticsArtoo(A rduino,Leap Motion, Pebble, Raspberry Pi
84.	34.	Pagination	Kaminari, order_query, Pagy, will_paginate
85.	35.	Performance Monitoring	Instrumental, New Relic, Scout, Skylight, TraceView

Hardware	ino, keyboard, mouse, Pingo, PyUserInput, scapy, wifi
Interactive Interpreter	bpython,Jupyter Notebook(IPython), ptpython
Job Scheduler	APScheduler,django-schedule,doit, gunnery, Joblib, Plan,
Microsoft Windows	Python(x,y), pythonlibs, PythonNet, PyWin32, WinPython
Miscellaneous	blinker, boltons, itsdangerous, pluginbase, tryton
News Feed	django-activity-stream, Stream Framwork
Package Repositories	warehouse, bandersnatch, devpi, localshop
Permissions	django-gaurdian, django-rules
Recommender Systems	annoy,fastFM, implicit, libffm, lightfm,spotlight, Surprise,
Serialization	Marshmallow,pysimdjson, python-rapidjason
Tagging	Django-taggit
Text processing	**General**(chardet, difflib, ftfy,fuzzywuzzy,Levensh ein, pangu.py, pypinyin, textdistance,unidecode)**Sl ugify**(aw eso me-slugify, python-slugify,unicode-slugify) **Unique identifiers**(hashids, shortuuid)**Parser**
URL manipulation	Furl, purl, pyshorteners, webargs
Web asset management	Django-compressor, django-pipeline, django-staorage, fantastic, fileconveyer, flask-assets,
Web content extracting	Html2text,lassie, micawber, newspaper,toapi,python-readability, requests-html, sumy
WSGI Servers	Bjoern, gunicorn, uWSGI,waitress, werkzeug

86.	36.	Process Manageme ntand	Bluepill, Eye, Foreman, God, Health Monitor Rails,
87.	37.	Profiler and Optimization	Batch-loader,benchmark-ip s, bullet, Derailed Benchmarks, Peek, perftools.rb,rack-mini-profile r, Rbkit,rbspy, ruby-prof
88.	38.	QR	QR-code
89.	39.	RSS	Feed normalizer, Feedjira, feedparser, Ratom, Simple rss, Stringer
90.	40.	Scheduling	Minicron, resque-scheduler, rufus-scheduler, Sidekiq-Cron, Whenever
91.	41.	Security	BeEF, bundler-audit, Girob, Metasploit, Rack::Attack, Rack::Protection,SecureHead ers
92.	42.	SEO	FriendlyId, MetaTags, prerender_rails, SitemapGenerator
93.	43.	Social Networking	Decidim, diaspora*, Discourse, Mailboxer, Mastodon,Social Shares, Thredded
94.	44.	State Machines	AASM, FiniteMachine, MicroMachine, simple_states,Statesman ,state_machines, transitions,Workflow
95.	45.	View helpers	Auto_html, Bh, gon, Komponent, Pluggables, render_async
96.	46.	Web servers	Goliath,Iodine,Phusion Passenger,Puma, Rack, Reel, Thin, TorqueBox, Unicorn

VI. RESULT AND DISCUSSION

After a deep walk-through, the most obvious question for anyone would be which language is the better choice? Most of the programmers have no answer for the same. The ultimate truth is that the average programmer doesn't care much about it. But in reality these nitpicky factors contribute a lot to the final user experience of a product or service.

In my perspective, Python as such is much like a universal language focusing on area like scientific calculations, web development, machine learning etc...whereas Ruby's prime attraction is when it comes to web development but lacks a lot in data analytics and such counterpart areas. When it comes to numbers, Ruby tops the chart with 96+ libraries whereas Python with 83+ major libraries. But the reality is that these libraries are more refined and consolidated in Python than in Ruby, so numbers here doesn't matter as much.

In my findings, all the major functionalities with these libraries in Ruby are also available in Python as well but are not wavered as than in Ruby. So at the end I felt that Python excels in terms of its all-round abilities when locked horns against Ruby

VII. CONCLUSION

Here the contrast is performed on the basis of libraries and frameworks of both Ruby and Python. From the take a look at I finish that the Python is most power full and efficient language for most of the regions like analytics, robotics and web development and so on and Ruby is specifically focused on web development. This is due to Python have a bundle of library help for all of those areas and Ruby doesn't have a much amount of library assistance like python.

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