

Experimentos Linguísticos com a plataforma PCIBEX



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AULA 1

Panorama do Curso

- 1) O que é a plataforma PCIBEX?
- 2) Iniciação à plataforma PCIBEX.
- 3) Criando um script para experimento de Leitura Automonitorada.
- 4) Criando um repositório no GitHub.
- 5) Criando um script para um Teste Auditivo.
- 6) Criando um Teste de decisão lexical com imagens.

O que é a plataforma

PCIBEX?



A sigla PCIBEX

**PC =
PennController**



**Ibex =
Internet Based
EXperiments**



Plataforma Ibex Farm



- Criada originalmente por Alex Drummond.
- Permite rodar experimentos psicolinguísticos de forma remota, em navegadores da internet.
- Inicialmente criada para rodar dois tipos de experimento: leitura automonitorada e julgamento de aceitabilidade.
- Link: <https://spellout.net/ibexfarm/>



PennController for IBEX

- Extensão do IBEX desenvolvida e gerenciada por Jeremy Zehr e prof. Florian Schwarz na Universidade da Pensilvânia (Upenn).





PennController for IBEX

- Plataforma gratuita, versátil e amigável.
- Permite criar experimentos dinâmicos e interativos.
- Permite criar diferentes tipos de estímulos:
 - Escritos
 - Imagens
 - Áudios
 - Vídeos
- O PennController é atualizado de tempos em tempos.



PennController for IBEX

- A plataforma usa JavaScript e HTML.
- Interface com códigos simplificados: não é necessário ter conhecimento de JavaScript para programar os experimentos.
- Compatível com: Google Chrome, Firefox, Internet Explorer, Safari e Opera.
- Os comandos dos experimentos são escritos na linguagem Python.



Python

- Linguagem de programação de alto nível.
- Permite escrever em **linguagem de script**.



conjunto de instruções para que uma função seja executada em determinado aplicativo.



Python

- Um exemplo:

A screenshot of a code editor window titled 'hello.py'. The editor shows a Python script with the following code:

```
1  #!/Library/Frameworks/Python.framework/Versions/3.7/bin/python3
2
3  print('Hello World')
4  print(5 + 4)
5  name = 'John'
6  print(name)
7
```

The code is color-coded: comments are grey, strings are yellow, and code is blue. The editor interface includes a tab bar at the top with 'hello.py' and a close button. At the bottom, it shows 'Line 7, Column 1' and 'Tab Size: 4'.

Imagem retirada de Mackie, 2019



Experimentos no PCIBEX

- Vejamos alguns exemplos de experimentos feitos no PCIBEX:

- Leitura Automonitorada

https://expt.pcibex.net/ibexexps/minicursolec/leitura_automonitorada/experiment.html

- Teste Auditivo

https://expt.pcibex.net/ibexexps/minicursotesteauditivo/Teste_Auditivo/experiment.html

- Teste de Imagens

<https://expt.pcibex.net/ibexexps/asilva91/tuto/experiment.html>

Iniciação à plataforma

PCIBEX



PCIBEX

A página inicial: <https://www.pcibex.net/>

 pcIBEX Experiment Farm (new) Experiment Farm (expt) Documentation 

PennController for IBEX

As of February 2021,

the PCIBex website has moved to:

doc.pcibex.net

the new PCIBex Farm is at:

farm.pcibex.net

[Learn more](#)

(Note: new account setup required! Existing accounts and projects from expt.pcibex.net are not automatically transferred, but will remain accessible at the old url)





PCIBEX: Documentation

The new [PCibex Farm](#) is here! Be sure to check out all of its [new features and changes](#).



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[Support](#)



[PennController 1.9](#)



PennController for IBEX

A free, open-source, versatile, and user-friendly online experiment builder.

[TRY A DEMO](#)

[GET STARTED](#)

[TAKE THE TUTORIAL](#)

About

PennController for Internet Based Experiments ("PennController" or "PCibex" for short) provides the tools to build and run online experiments, from familiar paradigms like self-paced reading to completely custom-designed paradigms.

The **PCibex Farm**'s interface comes with [many features](#) to help you design and run your experiments, including:

- a streamlined *editor*, with a *preview* window
- the possibility to *share* and *copy* projects in a single click ([try it!](#))
- and [many more](#)



PCIBEX: Support

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[FAQs](#)

[Troubleshooting](#)

[Forums](#)

[△ Deprecated features](#)



[PennController 1.9](#)



Support

The PCibex Forums are at <https://www.pcibex.net/forums/>

To send us a message, use this address: support@pcibex.net


Notes:


- when troubleshooting your experiment, make sure your to [use the Debugger](#)
- to share code or other components of your project, please share the **demonstration link** from [the Share option of your project's Actions menu](#)

Contact us: admin@pcibex.net





PCIBEX: Support




 [Experiment Farm](#) [Documentation](#) [Support](#)



Forums


[PennController for IBEX](#) > Forums


Forum	Topics	Posts	Freshness
Support If you have any technical issues with PennController, this is the place to ask your questions!	199	954	1 day, 22 hours ago  abraver
FAQ / Tips This section addresses issues people frequently encounter	7	46	3 months ago  Jeremy
Requests Post you feature requests here (e.g. "add a drag-and-drop element!")	5	20	3 months, 3 weeks ago  Jeremy



PCIBEX: Support

- Observação: é preciso criar conta tanto para elaborar experimentos quanto para postar no fórum.

 [Experiment Farm](#) [Documentation](#) [Support](#)



Log in

Please note: you cannot use your PCIBEX Farm account on the forums---you need to Register an account here to post on the forums.

Username:

Password:

☐ Remember Me

[Register](#)

[Lost Password](#)

[Log In](#)

About

Cite us: Zehr, J., & Schwarz, F. (2018). PennController for Internet Based Experiments (IBEX). <https://doi.org/10.17605/OSF.IO/MD832>

Contact us: admin@pcibex.net

Backstory: [see page](#)

Acknowledgments

This project has been made possible by a grant from Penn's University Research Foundation, titled 'Building a Comprehensive Library for Online Experiments in IBEX.' Initial development of preliminary versions of many of the tools that are part of PennController took place as part of work on NSF-grant BCS-1349009 to Florian Schwarz. It is currently maintained by Jeremy Zehr who is a post-doctoral researcher for the Integrated Language Sciences and Technology initiative at mindCORE.



PCIBEX: Support

- Você também pode mandar e-mails para tirar dúvidas:

admin@pcibex.net



PCIBEX: Experiment Farm

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DATA COLLECTION IS TEMPORARILY DOWN. [Read more about it.](#)

Reopen last unsaved experiment

Start a new project

- [Empty project](#)
- [Masked Priming](#)
- [Stroop Task](#)
- [Self-Paced Reading](#)
- [Covered Box Experiment](#)
- [Mouse Tracking](#)
- [MediaRecorder](#)
- [EyeTracker](#)



PCIBEX: Sign up / Login

Home Masked Priming_copy (0MB) Sign up Log in Doc Support

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Folders and Files

- Resources (...)
- filter...
- list.c... (0kB)

Scripts (0M...)

- filter...
- main.js (0kB)

main.js

```
1 PennController.ResetPrefix(null) // Shorten command names (keep this line here)
2
3 // DebugOff() // Uncomment this line only when you are 100% done designing
4
5 // Start with
6 // and show the
7 Sequence( "wel
8
9 Header( /* voi
10 // This .T
11 .log( "ID"
12
13 // Welcome scr
14 newTrial( "wel
15 // We will
16 defaultTex
17
```

SIGN UP

Username

Password

Password confirmation

Email address ^{why}

SIGN UP

or Log in with an existing account

Actions

- Unpublished
- Results
- Share
- Download
- Git Sync
- Settings

Refresh [Open in new tab](#)



PCIBEX: Sign up / Login

Home

Masked Priming_copy (0MB)

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Folders and Files

Resources (...)

filter...

list.c... (0kB)

main.js x

1 PennController.ResetPrefix(null) // Shorten command names (keep this line here)

2

3 // DebugOff() // Uncomment this line only when you are 100% done designing

4

5 // Start with welcome screen, then present test trials in a random order,

6 // and show the final screen after sending the results

7 Sequence("welcome", "final")

8

9 Header(/* your header text goes here */

10 // This is the text that will be displayed at the top of the screen

11 .log("ID")

12

13 // Welcome screen

14 newTrial("welcome")

15 // We will now show the welcome screen

16 defaultText("welcome")

17

Ace Editor

Actions

Unpublished

Results

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Settings

LOG IN

Username

Curso_PPG_UFJF

Password

.....

LOG IN

or Sign up for a new account

Forgot your password?

Click 'Refresh' to preview this experiment



Exemplos de experimentos/ scripts



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Doc



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Reopen last unsaved experiment

Start a new project

[Empty project](#)

[Masked Priming](#)

[Stroop Task](#)

Masked Priming

A prime word is shown for 40-50ms before being replaced with a text that participants report as word or non-word

[Self-Paced Reading](#)

[Covered Box Experiment](#)

[Mouse Tracking](#)

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Exemplos de experimentos/ scripts

Home

Masked Priming_copy (0MB)

Sign up Log in Doc Support

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Folders and Files

▼ Resources (...)

filter...

list.C... (0kB)

▼ Scripts (0M...

filter...

main.js (0kB)

main.js x

```
1 PennController.ResetPrefix(null) // Shorten command names (keep this line here)
2
3 // DebugOff() // Uncomment this line only when you are 100% done designing
4
5 // Start with welcome screen, then present test trials in a random order,
6 // and show the final screen after sending the results
7 Sequence( "welcome" , "practice" , randomize("test") , "send" , "final" )
8
9 Header( /* void */ )
10 // This .log command will apply to all trials
11 .log( "ID" , GetURLParameter("id") ) // Append the "ID" URL parameter to the log
12
13 // Welcome screen and logging user's ID
14 newTrial( "welcome" ,
15 // We will print all Text elements, horizontally centered
16 defaultText.center().print()
17
```

Actions

Unpublished

Results

Share

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Settings

Preview experiment

Refresh [Open in new tab](#)

Click 'Refresh' to preview this experiment

Message

This is an unsaved copy of the experiment named Masked Priming (slug HQYVHQ)



Criando um experimento



Projects — 0/64MB (0%)

Curso_PPG_UFJF

Log Out

Doc

Support

DATA COLLECTION IS TEMPORARILY DOWN. [Read more about it.](#)

Reopen last unsaved experiment

Your projects

Name must contain...

Sort by: Name

▼ Last edit

Size

Start a new project

↗ Empty project

↗ Masked Priming

↗ Stroop Task

↗ Self-Paced Reading

↗ Covered Box Experiment

↗ Mouse Tracking

↗ MediaRecorder

↗ EyeTracker



Criando um experimento

Projects — 0/64MB (0%)

Empty project_copy (0MB)

Curso_PPG_UFJF Log Out Doc Support

DATA COLLECTION IS TEMPORARILY DOWN. [Read more about it.](#)

Folders and Files

▼ Resources (...)

filter...

Scripts (0M...

filter...

main.js (0kB)

Aesthetics...

Modules (0M...

main.js x

1 PennController.ResetPrefix(null) // Keep here

2

Project's name

Ace Editor

Actions

Unpublished

Results

Share

Download

Git Sync

Settings

Preview experiment

Refresh [Open in new tab](#)

Click 'Refresh' to preview this experiment

Message

This is an unsaved copy of the experiment named Empty project (slug CVCGXd)



Criando um experimento



Projects — 0/64MB (0%)

Curso_PPG_UFJF Log Out Doc Support

DATA COLLECTION IS TEMPORARILY DOWN. [Read more about it.](#)

Your projects

Name must contain...

Sort by: Name

▼ Last edit

Size



Novo_experimento

0.0MB

Try it

Clone

Rename

Delete

Start a new project

Empty project

Masked Priming

Stroop Task

Self-Paced Reading

Covered Box Experiment

Mouse Tracking

MediaRecorder

EyeTracker



A plataforma de edição

Projects — 0/64MB (0%)

Novo_experimento (0MB)

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Folders and Files

▼ Resources (...)

filter...

main.js x

1 PennController.ResetPrefix(null) // Keep here

2

Scripts (0M...)

filter...

main.js (0kB)

▶ Aesthetics...

▶ Modules (0M...

main.js x

1 PennController.ResetPrefix(null) // Keep here

2

Preview experiment

Refresh [Open in new tab](#)

Click 'Refresh' to preview this experiment

Ace Editor

Actions

Unpublished

Results

Share

Download

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Settings



A plataforma de edição

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Novo_experimento (0MB)

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Folders and Files

Resources (...)

filter...

main.js (0kB)

main.js x

1 PennController.ResetPrefix(null) // Keep here

2

Preview experiment

Click 'Refresh' to preview this experiment

Ace Editor

Actions

Unpublished

Results

Share

Download

Git Sync

Settings

Refresh

[Open in new tab](#)



A plataforma de edição

O espaço interno
do PC Ibex
é bem **pequeno**
(64MB)

The screenshot displays the IBEX editor interface. At the top, a header bar shows 'Projects — 0/64MB (0%)', 'Novo_experimento (0MB)', 'Curso_PPG_UFJF', 'Log Out', 'Doc', and 'Support'. Below the header, a red banner states 'DATA COLLECTION IS TEMPORARILY DOWN. [Read more about it.](#)'. The interface is divided into three main sections: a left sidebar with 'Folders and Files' and 'Scripts (0M...)', a central 'Ace Editor' for editing 'main.js', and a right sidebar with 'Actions'. The 'main.js' file is open, showing a single line of code: `PennController.ResetPrefix(null) // Keep here`. The 'Scripts' section shows a list of files, including 'main.js (0kB)'. The 'Actions' panel on the right includes a toggle for 'Unpublished', and buttons for 'Results', 'Share', 'Download', 'Git Sync', and 'Settings'. At the bottom, a 'Preview experiment' section contains a 'Refresh' button and a link 'Open in new tab'. A message at the bottom center reads 'Click 'Refresh' to preview this experiment'.

Projects — 0/64MB (0%) Novo_experimento (0MB) Curso_PPG_UFJF Log Out Doc Support

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Folders and Files

- ▼ Resources (...)
- filter...

Scripts (0M...)

- filter...
- main.js (0kB)

main.js x

```
1 PennController.ResetPrefix(null) // Keep here
2
```

Actions

- Unpublished
- Results
- Share
- Download
- Git Sync
- Settings

Preview experiment Refresh [Open in new tab](#)

Click 'Refresh' to preview this experiment



A plataforma de edição

Projects — 0/64MB (0%)

Novo_experimento (0MB)

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Folders and Files

▼ Resources (...)

filter...

Scripts (0M...

filter...

main.js (0kB)

Aesthetics...

Modules (0M...

main.js x

1 PennController.ResetPrefix(**null**) // Keep here

2

Ace Editor

Actions

Unpublished

Results

Share

Download

Git Sync

Settings

Preview experiment

Refresh [Open in new tab](#)

Click 'Refresh' to preview this experiment

Solução para o espaço pequeno da plataforma

Veremos isso mais adiante.



A plataforma de edição

Projects — 0/64MB (0%)

Novo_experimento (0MB)

Curso_PPG_UFJF Log Out Doc Support

DATA COLLECTION IS TEMPORARILY DOWN. [Read more about it.](#)

Folders and Files

▼ Resources (...)

filter... [trash] [download]

main.js x

1 PennController.ResetPrefix(null) // Keep here

2

Scripts (0M...)

filter... [trash] [download]

main.js (0kB)

Preview experiment

Refresh [Open in new tab](#)

Click 'Refresh' to preview this experiment

Actions

Unpublished

Results

Share

Download

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Settings



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Folders and Files

- Resources (...)
 - filter...
- Scripts (0M...)
 - filter...
 - main.js (0kB)
- Aesthetics...
- Modules (0M...

main.js x

```
1 PennController.ResetPrefix(null) // Keep here
2
```

Actions

- ☐ Unpublished
- Results
- Share
- Download
- Git Sync
- Settings

Preview experiment Refresh [Open in new tab](#)

Click 'Refresh' to preview this experiment

Link do seu
experimento.





A plataforma de edição

Home Masked Priming_copy (0MB) Sign up Log in Doc Support

DATA COLLECTION IS TEMPORARILY DOWN. [Read more about it.](#)

Folders and Files

- Resources (...)
- filter...
- list.c... (0kB)

main.js

```
1 PennController.ResetPrefix(null) // Shorten command names (keep this line here)
2
3 // DebugOff() // Uncomment this line only when you are 100% done designing
4
5 // Start with welcome screen, then present test trials in a random order,
6 // and show the final screen after sending the results
7 Sequence
8
9 HeaderC
10 //
11 .log
12
13 // Welc
14 newTrial
15 //
16 defo
17
```

Scripts (0M...

- filter...
- main.js (0kB)

Preview experime

Aesthetics...

Modules (0M...

Actions

- Unpublished
- Results
- Share
- Download
- Git Sync
- Settings

Open in new tab

SHARE THIS EXPERIMENT

Demonstration link^{info}

<https://farm.pcibex.net/r/TwQNLV/> [Copy link](#)

Data-collection link^{info}

<https://farm.pcibex.net/p//> [Copy link](#)

This link is only valid as long as your experiment is *Published*.
It is fully anonymous and people cannot clone your project from it.

Click 'Refresh' to preview this experiment

Message

This is an unsaved copy of the experiment named Masked Priming (slug HQYVHQ)

Link do seu experimento.



Criando uma tabela de itens

The [new PCibex Farm](#) is here! Be sure to check out all of its [new features and changes](#).



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8. Creating a trial template

9. Customizing an experiment

10. Counterbalancing

11. Collecting participant information

12. Examining data

13. Wrapping up

[How-to guides](#)

[Elements](#)

[Commands](#)

[Support](#)

[PennController 1.9](#)

Tables are CSV (comma separated value) files that are either imported into an experiment page's **Resources** folder, or defined within an experiment script.

8.2.1. Using a table

We'll use the `items.csv` table, which was included during the [set up](#) of the **BasicTutorial** experiment.

Note: You may need to scroll to the right to see all the columns.

group	item	sentence	inflection
A	1	The fish swim in a tank which is perfectly round	plural
A	2	The deer runs in a wood which is extremely dense	singular
A	3	The sheep roam in a pen which is strikingly blue	plural
A	4	The moose walks in a park which is visibly new	singular
B	1	The fish swims in a tank which is perfectly square	singular
B	2	The deer run in a wood which is extremely sparse	plural
B	3	The sheep roams in a pen which is strikingly red	singular
B	4	The moose walk in a park which is visibly old	plural

If a table contains a column named `group` or `row`, PennController will automatically alternate which group of items is run! In this case, there are two groups, so every odd-numbered participant will only see the 4 items from the **A** group, and every even-numbered participant will only see the 4 items from the **B** group (or vice versa).



items.csv

- Um comando pré-estabelecido no script apontará para cada linha da tabela ao rodar o experimento.

myTable.csv PennController docs ibex docs x

```
i 1 Frase,Pergunta,Item,Grupo
2 A_Beatriz assou a_pizza e a_Carla o_bolo de_limão pro_lanche.,A Carla assou uma pizza pro lanche?,GAP,A
3 O_Ricardo plantou o_cravo e o_Marcos arrumou o_jardim dos_fundos.,O Marcos estragou o jardim dos fundos?,SEN,A
4 A_Simone usou a_pulseira e o_anel de_ouro na_festa do_bairro.,A Simone usou um colar na festa?,OBJ,A
5 A_Beatriz assou a_pizza e o_bolo de_limão pro_lanche da_tarde.,A Beatriz assou biscoitos pro lanche?,OBJ,B
6 O_Ricardo plantou o_cravo e o_Marcos a_rosa no_jardim dos_fundos.,O Marcos plantou a margarida no jardim?,GAP,B
7 A_Simone usou a_pulseira e a_Leda admirou a_joia de_ouro.,A Leda odiou a joia de ouro?,SEN,B
8 A_Beatriz assou a_pizza e a_Carla preparou um_suco de_limão.,A Carla assou uma pizza?,SEN,C
9 O_Ricardo plantou o_cravo e a_rosa no_jardim dos_fundos da_casa.,O Ricardo plantou três tipos de flores?,OBJ,C
10 A_Simone usou a_pulseira e a_Leda o_anel de_ouro na_festa.,A Leda usou um colar de ouro na festa?,GAP,C
```

Discard changes Save changes Save and close Save and test



Os resultados

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Novo_experimento (0MB)

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Folders and Files

▼ Resources (...)

filter... [trash] [download]

main.js x

1 PennController.ResetPrefix(null) // Keep here

2

Ace Editor

Actions

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▼ Scripts (0M...)

filter... [trash] [download]

main.js (0kB)

Preview experiment

Refresh [Open in new tab](#)

Click 'Refresh' to preview this experiment

► Aesthetics...

► Modules (0M...

Cada comando/ação do participante é registrado em uma linha. As diferentes partes são separadas por vírgulas. Assim é possível exportar o arquivo como uma planilha .csv



Recados

- Para as próximas aulas:
 - Lembrete: guardem os dados da conta que você criou no PCIBEX Farm.
 - Dica para as Aulas 2, 3 e 4: assistir a aula em outro dispositivo (celular, tablet) e usar o computador para mexer na plataforma.
 - Usaremos na Aula 2 os arquivos da pasta “**Aula 2/ Leitura Automonitorada**”
 - Certifiquem-se de baixar os materiais no repositório do GitHub:
https://github.com/julia-greco/Curso_Livre_PCIBex

Referências

HUNT, J. **A Beginners Guide to Python 3 Programming**. Brighton, UK: Springer Publishing Company, 2019.

ZEHR, J.; SCHWARZ, F. **PennController for Internet Based Experiments (IBEX)**. 2018. < <https://doi.org/10.17605/OSF.IO/MD832> >
Acesso em 25 de abril de 2021.

Por hoje é só!

