

# Manual Introdutório CoCalc

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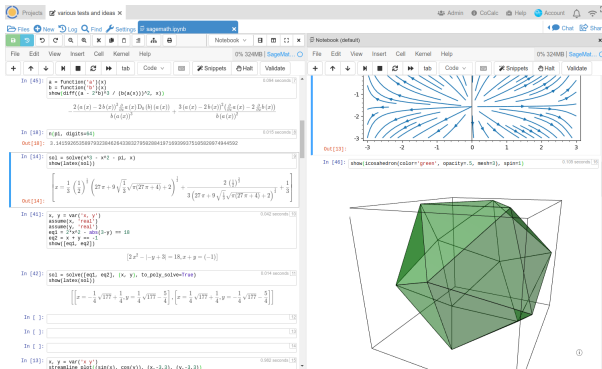
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# O que é o CoCalc?

O CoCalc é um espaço de trabalho virtual online para cálculos, pesquisas, colaboração e documentos de autoria. Os trabalhos no CoCalc são chamados de **"Projects"**. Cada projeto consiste em arquivos, acessíveis apenas para você e com quem compartilhar.



\*Pictures obtained from CoCalc.com.

## O que é o CoCalc?

Você e seus colaboradores podem editar esses arquivos ao mesmo tempo, o que significa que suas alterações são sincronizadas entre todos vocês em tempo real. Eles abrem em seu editor online associado e você começa a trabalhar interativamente no ambiente do CoCalc.

Exemplos:

- os arquivos que terminam em `*.ipynb` realiza as implementações no **Jupyter Notebook** (Python);
- os arquivos `*.m` realiza as operações do ambiente **GNU Octave** no CoCalc;
- os arquivos `*.tex` abre um editor de documentos **LaTeX** no CoCalc;



\*Logos obtained from Google Images, several sources.

# Criando uma conta

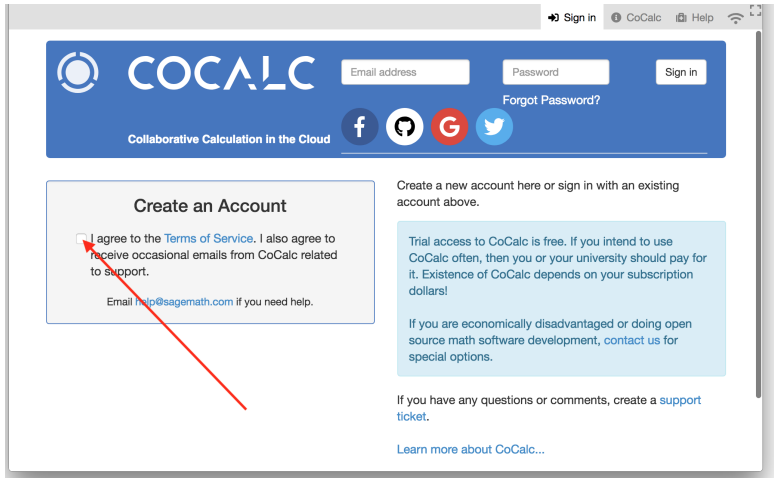
Em sua primeira visita ao **CoCalc.com**, você verá a tela de inicial. Clique em **Sign in!** :

The screenshot shows the CoCalc website interface. At the top, there is a navigation bar with the CoCalc logo and the tagline 'Collaborative Calculation and Data Science'. To the right of the logo are links for 'Features', 'Software', 'Pricing', 'Policies', 'Shared Files', 'Doc', and a 'Sign In' button. Below this is a secondary navigation bar with links for 'Jupyter', 'LaTeX', 'Linux', 'Octave', 'Python', 'R Stats', 'Teaching', 'Terminal', 'X11', 'Compare', and 'API'. The main content area has a light blue background and contains the text 'Your best choice for teaching remote scientific courses!' followed by 'Save weeks of class time troubleshooting software and make your TA's more effective.' Below this text are two buttons: 'Run CoCalc Now' (green) and 'Sign In' (white). A red arrow points from the 'Sign In' button towards the right side of the image. On the right side, there is a preview of the CoCalc Jupyter interface, showing a code editor with a Python script that calculates the Jacobian matrix of a system of equations and a plot of the corresponding vector field. The vector field plot shows trajectories in the phase plane, with a saddle point at the origin and two stable nodes at  $(-1, 1)$  and  $(1, -1)$ .

\*Picture from Cocalc.com


# Criando uma conta





Concorde com os **Termos de Serviço** ("Terms of Service"):



The screenshot shows the CoCalc website's account creation interface. At the top, there's a navigation bar with the CoCalc logo, the tagline "Collaborative Calculation in the Cloud", and social media icons for Facebook, GitHub, Google+, and Twitter. Below this, there's a "Create an Account" section with a checkbox for agreeing to the Terms of Service. A red arrow points to this checkbox. To the right of the checkbox, there's text about receiving occasional emails and a link to the Terms of Service. Below the checkbox, there's a link to the help email. To the right of the "Create an Account" section, there's a "Sign in" section with fields for email address and password, and a "Sign in" button. Below the sign in fields, there's a link for "Forgot Password?". At the bottom, there's a light blue box with text about trial access to CoCalc and a link to create a support ticket. Below the light blue box, there's a link to learn more about CoCalc.

Sign in CoCalc Help

 **COCALC** Email address Password Sign in

Collaborative Calculation in the Cloud     Forgot Password?

**Create an Account**

☐ I agree to the [Terms of Service](#). I also agree to receive occasional emails from CoCalc related to support.

Email [help@sagemath.com](mailto:help@sagemath.com) if you need help.

Create a new account here or sign in with an existing account above.

Trial access to CoCalc is free. If you intend to use CoCalc often, then you or your university should pay for it. Existence of CoCalc depends on your subscription dollars!

If you are economically disadvantaged or doing open source math software development, contact us for special options.

If you have any questions or comments, create a [support ticket](#).

[Learn more about CoCalc...](#)

\*Picture from Cocalc.com





# Criando uma conta

Collaborative Calculation in the Cloud

## Create an Account

☒ I agree to the [Terms of Service](#). I also agree to receive occasional emails from CoCalc related to support.

Connect with

Or sign up via email

First name

Last name

Email address

Choose a password

**Sign Up!**

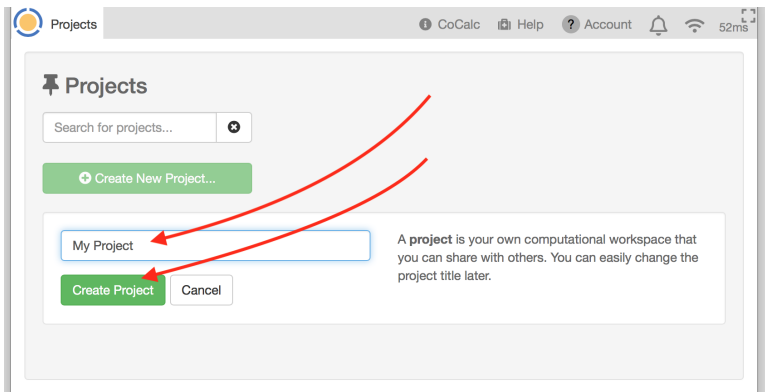
Email [help@sagemath.com](mailto:help@sagemath.com) if you need help.

Escolha um método de login. Além de se inscrever com seu endereço de e-mail, você pode criar usando suas credenciais do Facebook, Github, Google ou Twitter. Caso escolha inscrever-se por e-mail, preencha os campos indicados na imagem ao lado (primeiro nome, último nome, e-mail e senha):

\*Picture from Cocalc.com

## Criando um projeto

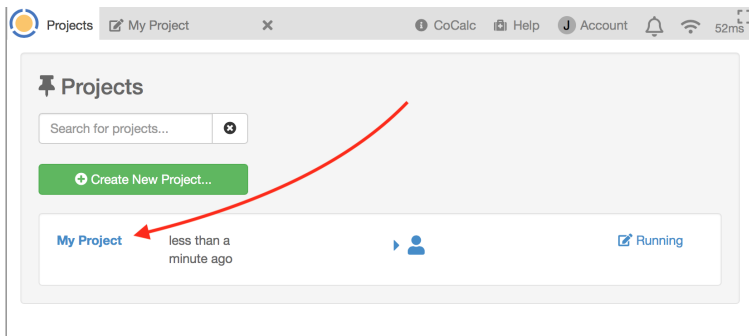
Agora que você está com uma conta, crie seu primeiro projeto. Clique na área **Project title** e insira um nome de projeto, por exemplo **"My Project"** e clique em **Create Project**.



\*Picture from CoCalc.com

# Criando um projeto

Depois que o projeto for criado, você o verá aparecer na sua lista de projetos. Clique no nome do projeto para abri-lo:



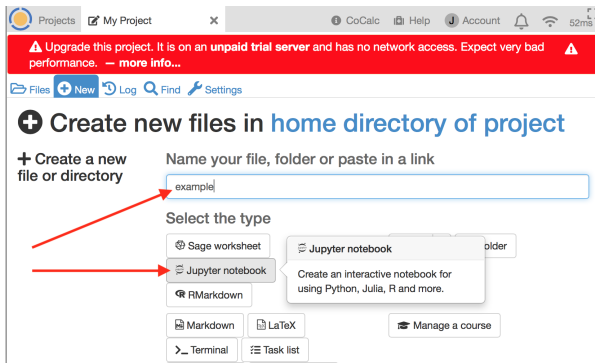
\*Picture from Cocalc.com



# Como criar um notebook Jupyter/GNU Octave?

Depois de abrir um projeto, você está pronto para criar um arquivo.

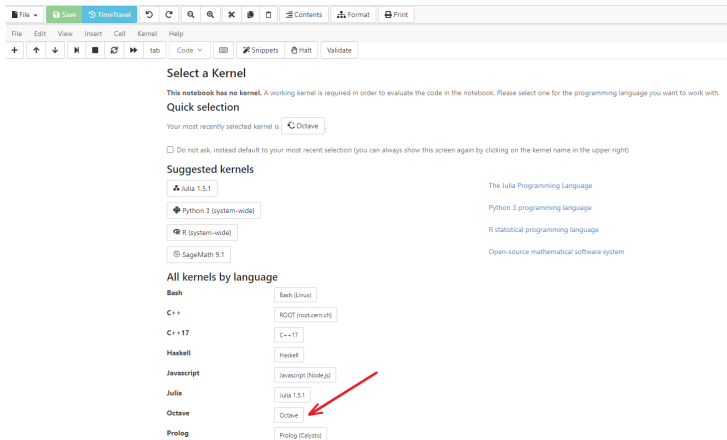
Clique em **(+)New** e insira o exemplo onde diz **example**, nomeie seu arquivo e clique no **Jupyter Notebook**.



\*Picture from CoCalc.com

# Como criar um notebook Jupyter/GNU Octave?

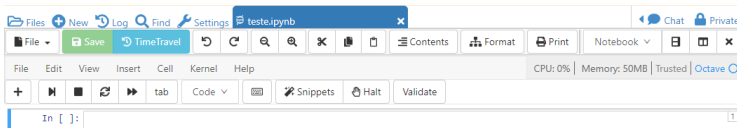
Clique na Kernel que será utilizada. Escolha a Kernel **Octave**.



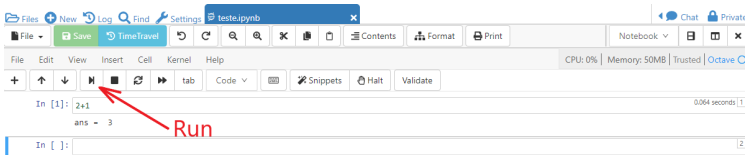
The screenshot shows the Jupyter Notebook interface. At the top is a menu bar with 'File', 'Edit', 'View', 'Insert', 'Cell', 'Kernel', and 'Help'. Below the menu bar is a toolbar with icons for saving, undo, redo, search, and other functions. The main area displays the 'Select a Kernel' dialog. It states: 'This notebook has no kernel. A working kernel is required in order to evaluate the code in the notebook. Please select one for the programming language you want to work with.' Under 'Quick selection', it says 'Your most recently selected kernel is Octave'. There is a checkbox 'Do not ask, instead default to your most recent selection (you can always show this screen again by clicking on the kernel name in the upper right)'. Under 'Suggested kernels', there are buttons for 'Julia 1.5.1', 'Python 3 (system-wide)', 'R (system-wide)', and 'SageMath 9.1'. To the right of these are links: 'The Julia Programming Language', 'Python 3 programming language', 'R statistical programming language', and 'Open-source mathematical software system'. Under 'All kernels by language', there is a list of languages with corresponding kernel buttons: 'Bash' (Bash (Linux)), 'C++' (ROOT (root.cern.ch)), 'C++17' (C++17), 'Haskell' (Haskell), 'JavaScript' (JavaScript (Node.js)), 'Julia' (Julia 1.5.1), 'Octave' (Octave), and 'Prolog' (Prolog (Calypto)). A red arrow points to the 'Octave' button.

# Como criar um notebook Jupyter/GNU Octave?

Insira uma linha de código **Octave** na primeira célula do notebook.



E clique em **Run** ou pressione **Shift-Enter** para executar o código.



## Mais informações sobre o CoCalc

`bluehttps://doc.cocalc.com`