



science & innovation

Department:  
Science and Innovation  
REPUBLIC OF SOUTH AFRICA



SARAO  
South African Radio  
Astronomy Observatory

# DON'T USE VSCODE

PyConZA October 2023

James Smith

[www.sarao.ac.za](http://www.sarao.ac.za)

The South African Radio Astronomy Observatory (SARAO) is a National Facility managed by the National Research Foundation and incorporates all national radio astronomy telescopes and programmes.

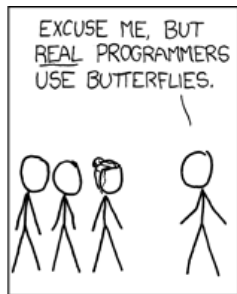
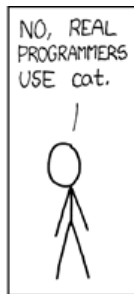
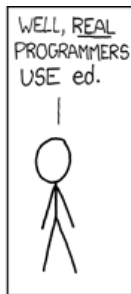
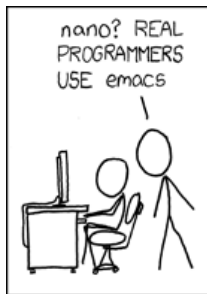
# Outline

- Introduction
- A little history
- The Good
- The Bad
- The Opinionated
- Recommendations

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# What I'm not trying to do

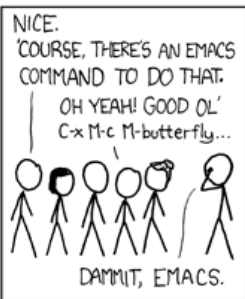
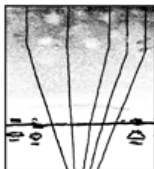


THE DISTURBANCE RIPPLES OUTWARD, CHANGING THE FLOW OF THE EDDY CURRENTS IN THE UPPER ATMOSPHERE.



THESE CAUSE MOMENTARY POCKETS OF HIGHER-PRESSURE AIR TO FORM,

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- Introduction
- A little history
  - 1995
  - 2012
  - 2011 – 2014
  - 2015
  - Present day
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# Netscape

A large yellow square containing the letters 'JS' in a bold, black, sans-serif font, representing JavaScript.

JS

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Microsoft

A large blue square with rounded corners containing the white letters 'T' and 'S' in a bold, sans-serif font.

TS

# Outline

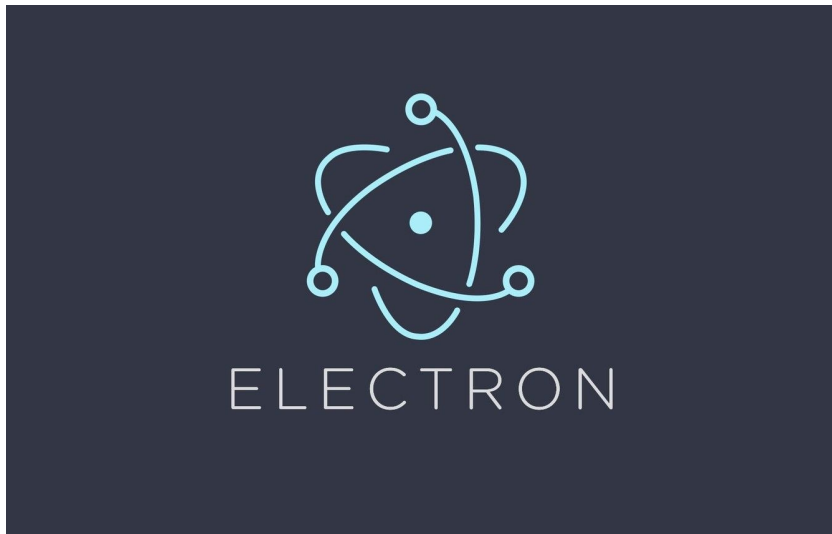
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Github



 ATOM

# Github



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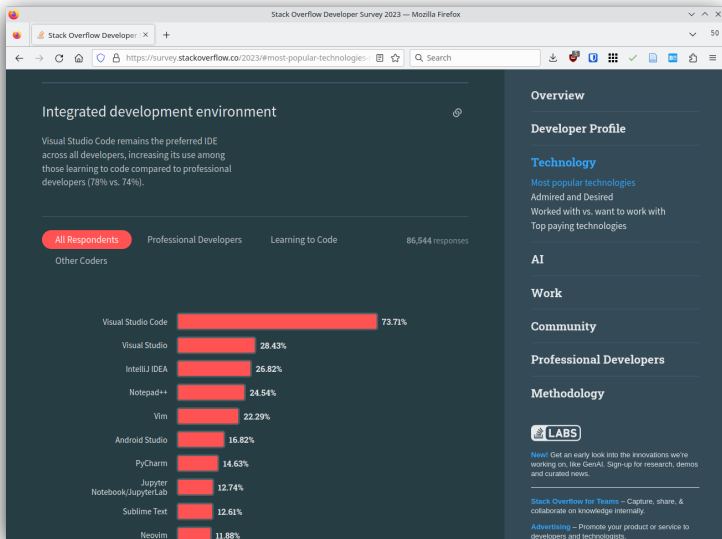
# Microsoft again



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# SO Survey 2023





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  - VSCode Server / Github Codespaces / Gitpod

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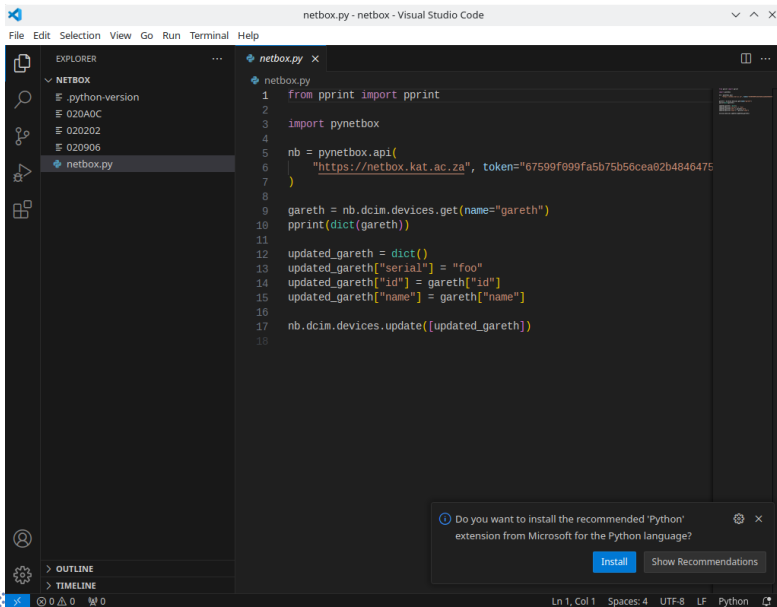
# A decent project too

- Single code-base for deploying to lots of targets, including web

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# Pre-demo



netbox.py - netbox - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXPLORER

- NETBOX
  - .python-version
  - 020A0C
  - 020202
  - 020906
  - netbox.py

```
1 from pprint import pprint
2
3 import pynetbox
4
5 nb = pynetbox.api(
6     "https://netbox.kat.ac.za", token="67599f099fa5b75b56cea02b4846475"
7 )
8
9 gareth = nb.dcim.devices.get(name="gareth")
10 pprint(dict(gareth))
11
12 updated_gareth = dict()
13 updated_gareth["serial"] = "foo"
14 updated_gareth["id"] = gareth["id"]
15 updated_gareth["name"] = gareth["name"]
16
17 nb.dcim.devices.update([updated_gareth])
18
```

Do you want to install the recommended 'Python' extension from Microsoft for the Python language?

Install Show Recommendations

Ln 1, Col 1 Spaces: 4 UTF-8 LF Python

# Pre-demo

The screenshot shows the Visual Studio Code interface with the Python extension page open. The window title is "Extension: Python - netbox - Visual Studio Code". The menu bar includes File, Edit, Selection, View, Go, Run, Terminal, and Help. The left sidebar shows the Extensions view with a search for "@id:ms-python.python" and a list of results including the Python extension by Microsoft. The main panel displays the Python extension details, including the Python logo, version v2023.16.0, publisher Microsoft, and a 4-star rating. The description highlights features like IntelliSense, linting, and debugging. The right sidebar shows categories like Programming Languages, Linters, and Debuggers, as well as extension resources and more info.

Extension: Python - netbox - Visual Studio Code

File Edit Selection View Go Run Terminal Help

EXTENSIONS: MARKE... netbox.py Extension: Python x

@id:ms-python.python

**Python** v2023.16.0  
Microsoft [microsoft.com](#) 98,218,235 ★★★★★  
IntelliSense (Pylance), Linting, Debugging (multi-threade...  
[Install](#)

**Python extension for Visual Studio Code**

A Visual Studio Code extension with rich support for the Python language (for all actively supported versions of the language: >=3.7), including features such as IntelliSense (Pylance), linting, debugging, code navigation, code formatting, refactoring, variable explorer, test explorer, and more!

**Support for [vscode.dev](#)**

The Python extension does offer [some support](#) when running on [vscode.dev](#) (which includes [github.dev](#)). This includes partial IntelliSense for open files in the editor.

**Installed extensions**

The Python extension will automatically install the [Pylance](#) extension to give you the best experience working with Python files. However, Pylance is an

**Categories**

- Programming Languages
- Linters
- Debuggers
- Formatters
- Data Science
- Machine Learning

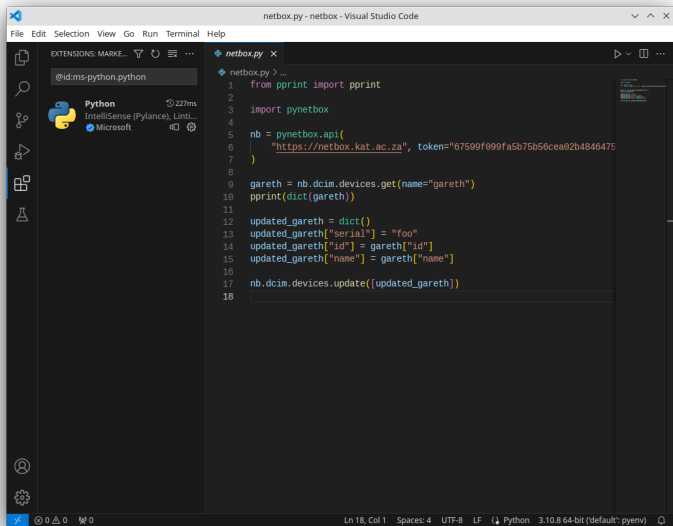
**Extension Resources**

- [Marketplace](#)
- [Repository](#)
- [License](#)
- [Microsoft](#)

**More Info**

Published 2016-1-19, 17:03:11  
Last updated 2023-9-26

# Pre-demo



```
netbox.py - netbox - Visual Studio Code
File Edit Selection View Go Run Terminal Help

EXTENSIONS: MARKE...
@id.ms-python.python

Python
IntelliSense (Pylance), Linti...
Microsoft

netbox.py x
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5 nb = pynetbox.api(
6     "https://netbox.kat.ac.za", token="67599f099fa5b75b56cea02b4846475"
7 )
8
9 gareth = nb.dcim.devices.get(name="gareth")
10 pprint(dict(gareth))
11
12 updated_gareth = dict()
13 updated_gareth["serial"] = "foo"
14 updated_gareth["id"] = gareth["id"]
15 updated_gareth["name"] = gareth["name"]
16
17 nb.dcim.devices.update([updated_gareth])
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```

Ln 18, Col 1 Spaces: 4 UTF-8 LF Python 3.10.8 64-bit (default: pyenv)



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- It's ... only fast sometimes.
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- And boy golly is it a memory hog!
  - Reason: Electron.
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  - Reason: remote server.



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  - Remote development
  - Default Python language server (Pylance)
  - Access to Microsoft-hosted VSCode Marketplace
- Build-it-yourself results in a substantially inferior experience
- Telemetry

# Healthy Biodiversity

- Software monocultures are not healthy. Choice is good.



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- This is the same reason we avoid Chrome.

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- **Recommendations**
  - Demo of what I do

# Start with your values

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- What is important to you?
- Strongly consider software freedom
- Don't overweight convenience

# Practical recommendations

- PyCharm (JetBrains)
- VSCodium / Code-OSS

# Interesting options

- lapce
- lite-xl
- ecode
- lunarvim

# Old-school tools

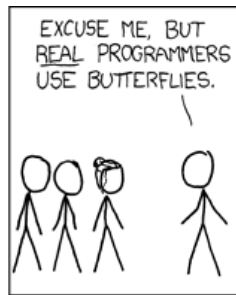
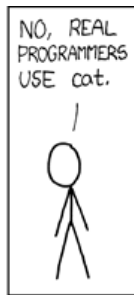
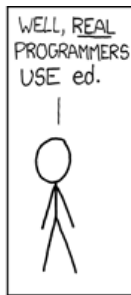
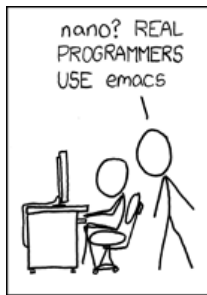
- Vim
  - Spare a thought in memory of Bram Moolenaar



# Modern takes

- Neovim
- Kakoune
- Helix
- Micro

# The EMACSephant in the room

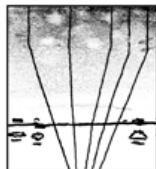


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NICE.  
'COURSE, THERE'S AN EMACS COMMAND TO DO THAT.  
OH YEAH! GOOD OL' C-x M-c M-butterfly...



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Thank you!

**James Smith**

DSP Engineer

Email: [jsmith@sarao.ac.za](mailto:jsmith@sarao.ac.za)

I was just kidding earlier, real programmers actually do use vim.

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