

# AWS Setup

Cloud Resources

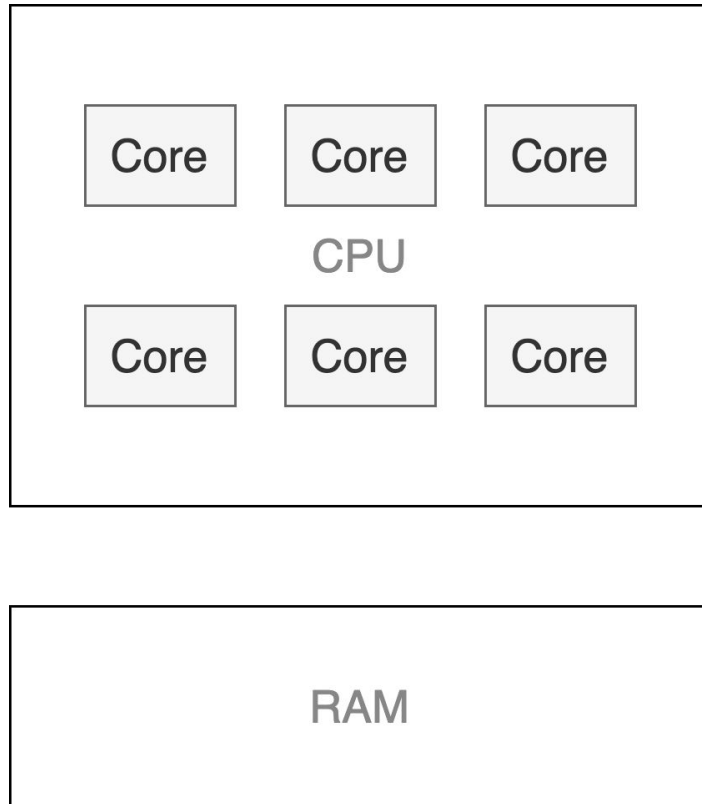
# Performance: Hardware

- Desktop CPUs

- Frequency = 2-4 GHz
- Cores = 1-12
- RAM = 8-64GB

- Server CPUs

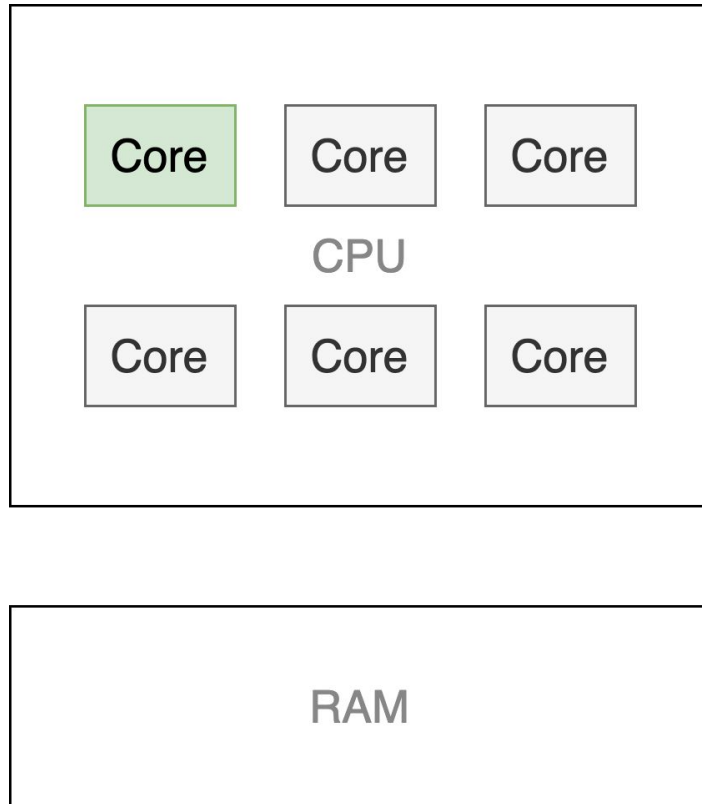
- Frequency = 2-4 GHz
- Cores = 1-96
- RAM = 1-1024GB



# Performance: Single-Process

Process 1: Python

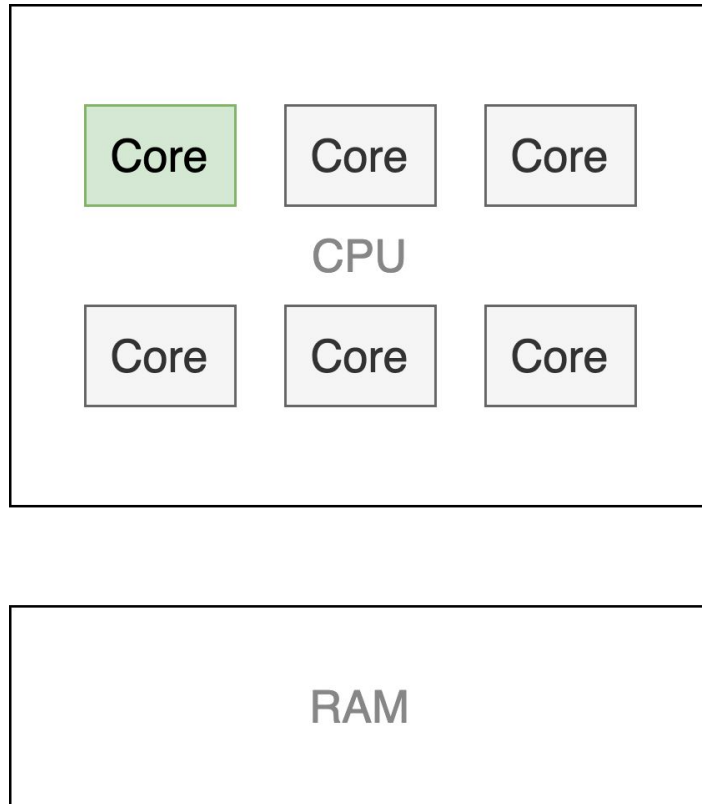
- Thread 1: Interpreter
  - Running your Python code



# Performance: Single-Process

## Process 1: Python

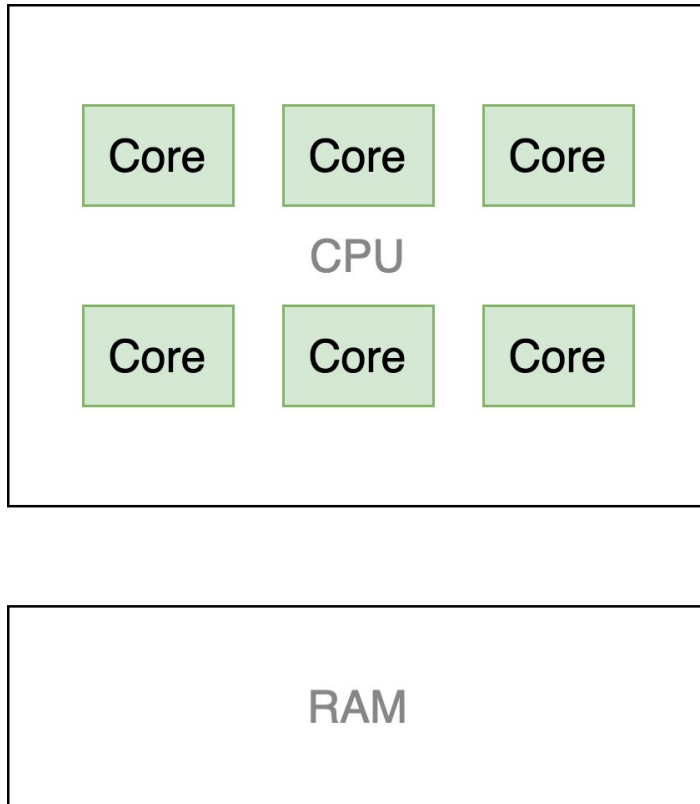
- Thread 1: Interpreter
  - Running your Python code
- Thread 2: NumPy/Tensorflow - C code
- Thread 3: NumPy/Tensorflow - C code
- Thread 4: NumPy/Tensorflow - C code
- Thread 5: NumPy/Tensorflow - C code
- Thread 6: NumPy/Tensorflow - C code
- Thread 7: NumPy/Tensorflow - C code



# Performance: Single-Process

## Process 1: Python

- Thread 1: Interpreter
  - Running your Python code
- Thread 2: NumPy/Tensorflow - C code
- Thread 3: NumPy/Tensorflow - C code
- Thread 4: NumPy/Tensorflow - C code
- Thread 5: NumPy/Tensorflow - C code
- Thread 6: NumPy/Tensorflow - C code
- Thread 7: NumPy/Tensorflow - C code



# Performance: Multi-Process

Process 1:

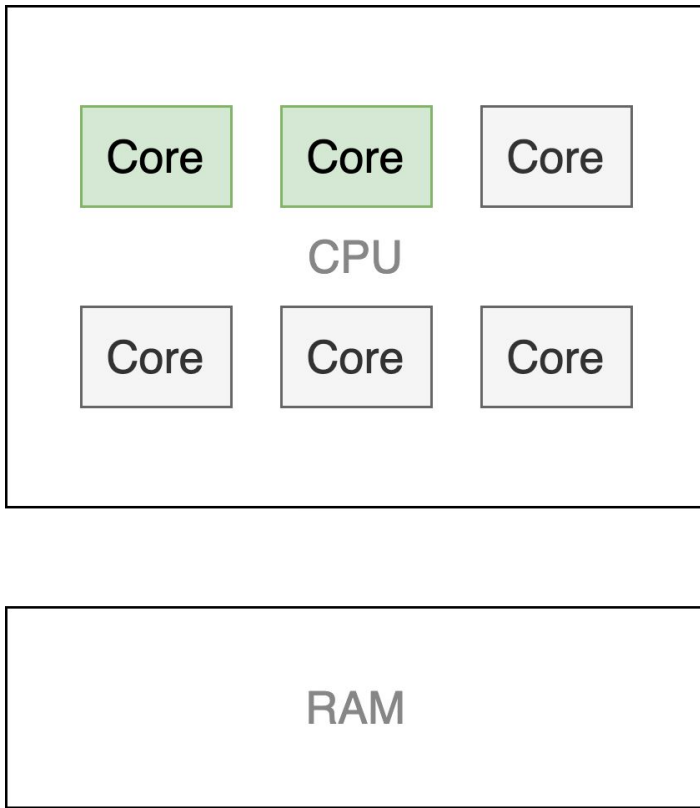
- Thread 1: Python Interpreter

Process 2:

- Thread 1: Python Interpreter

Examples:

- Jupyter notebooks / kernels
- Scikit-Learn (via Joblib)
- Tsfresh
- Dask



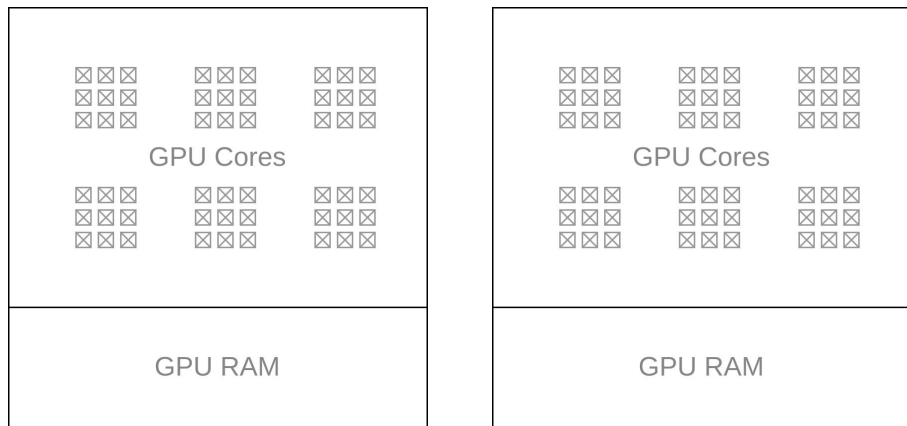
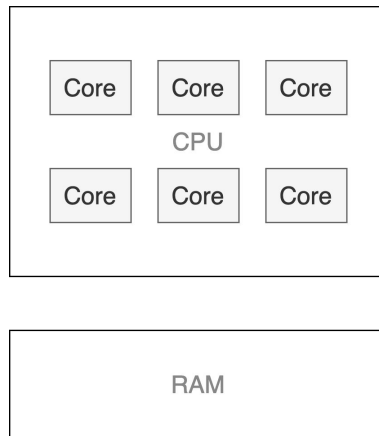
# Performance: GPU

- Desktop GPUs

- Frequency = 1-2 GHz
- Cores = 1000 - 2000
- RAM = 6-24GB
- Support for multiple GPUs

- Server GPUs

- Frequency = 1-2 GHz
- Cores = 3000 - 5000
- RAM = 12-16GB
- Support for multiple GPUs



# AWS Prices

Instance Type	CPU Cores	CPU RAM	\$ / hour	Hours / \$100
t2.large	2	8 GiB	\$0.0928	~1078
t2.xlarge	4	16 GiB	\$0.1856	~539
t2.2xlarge	8	32 GiB	\$0.3712	~269

Storage Type	\$ / GB / month	Months / 100GB / \$100
Elastic Block Store	\$0.10	10
Simple Storage Service	\$0.023	43.5

<https://aws.amazon.com/ec2/pricing/>



# Open AWS Starter Account



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## AWS Educate Starter Account

Your cloud journey has only just begun. Use your AWS Educate Starter Account to access the AWS Console and resources, and start building in the cloud!

AWS Educate Starter Account

Your account has an estimated **100** credits remaining and access will end on **Sep 30, 2021**.

Note: Clicking this button will take you to a third party site managed by Vocareum, Inc. ("Third Party Servicer"). In addition to the AWS Educate terms of service, your use of the AWS Educate Starter Account is governed by the Third Party Servicer's terms, including its Privacy Policy. AWS assumes no responsibility or liability and makes no representations or warranties regarding services provided by a Third Party Servicer.

# Copy AWS Credentials from Vocareum

Vocareum



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danylo.vashchilenk...

## Welcome to your AWS Educate Account

AWS Educate provides you with access to a wide variety of AWS Services for you to get your hands on and build on AWS! To get started, click on the AWS Console button to log in to your AWS console.

Please read the FAQ below to help you get started on your Starter Account.

- [What are the list of services supported?](#)
- [What regions are supported with Starter Accounts or Classroom Accounts?](#)
- [I can't start any resources. What happened?](#)
- [Can I create users within my Starter or Classroom Account for others to access?](#)

## Your AWS Account Status



Active

full access ( danylo.vashchilenko@anderson.ucla.edu )



\$100

remaining credits (estimated)



2:60

session time

Account Details

AWS Console

Please use AWS Educate Account responsibly. Remember to shut down your instances when not in use to make the best use of your credits. And, don't forget to logout once you are done with your work!

# Copy AWS Credentials from Vocareum

## Credentials

### AWS Access

Session started at: 2020-10-03T16:06:22-0700  
Session to end at: 2020-10-03T19:06:22-0700  
Remaining session time: 2h58m45s

Term: 48 days 17:37:09

### AWS CLI:

Copy and paste the following into ~/.aws/credentials

```
[default]
aws_access_key_id=A[REDACTED]X
aws_secret_access_key=x[REDACTED]q
aws_session_token=F[REDACTED]
[REDACTED]
```

Important: credentials expire every 3 hours.