7.07 AWS

What is Amazon EC2?

- Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the Amazon Web Services (AWS) Cloud.

- Using Amazon EC2 eliminates your need to invest in hardware up front, so you can develop and deploy applications faster.

- You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage.

- Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic.

What is Amazon EC2?

- Virtual computing environments, known as *instances*
- Preconfigured templates for your instances, known as *Amazon Machine Images (AMIs)*, that package the bits you need for your server (including the operating system and additional software)
- Various configurations of CPU, memory, storage, and networking capacity for your instances, known as *instance types*
- Secure login information for your instances using *key pairs* (AWS stores the public key, and you store the private key in a secure place)
- Multiple physical locations for your instances, known as Regions and Availability Zones

Use the free-tier – valid for 1-year

Welcome to Amazon Web Services

For the next 12 months, you'll have free access to core AWS compute, storage, database, and application services within the limits of the Free Tier.

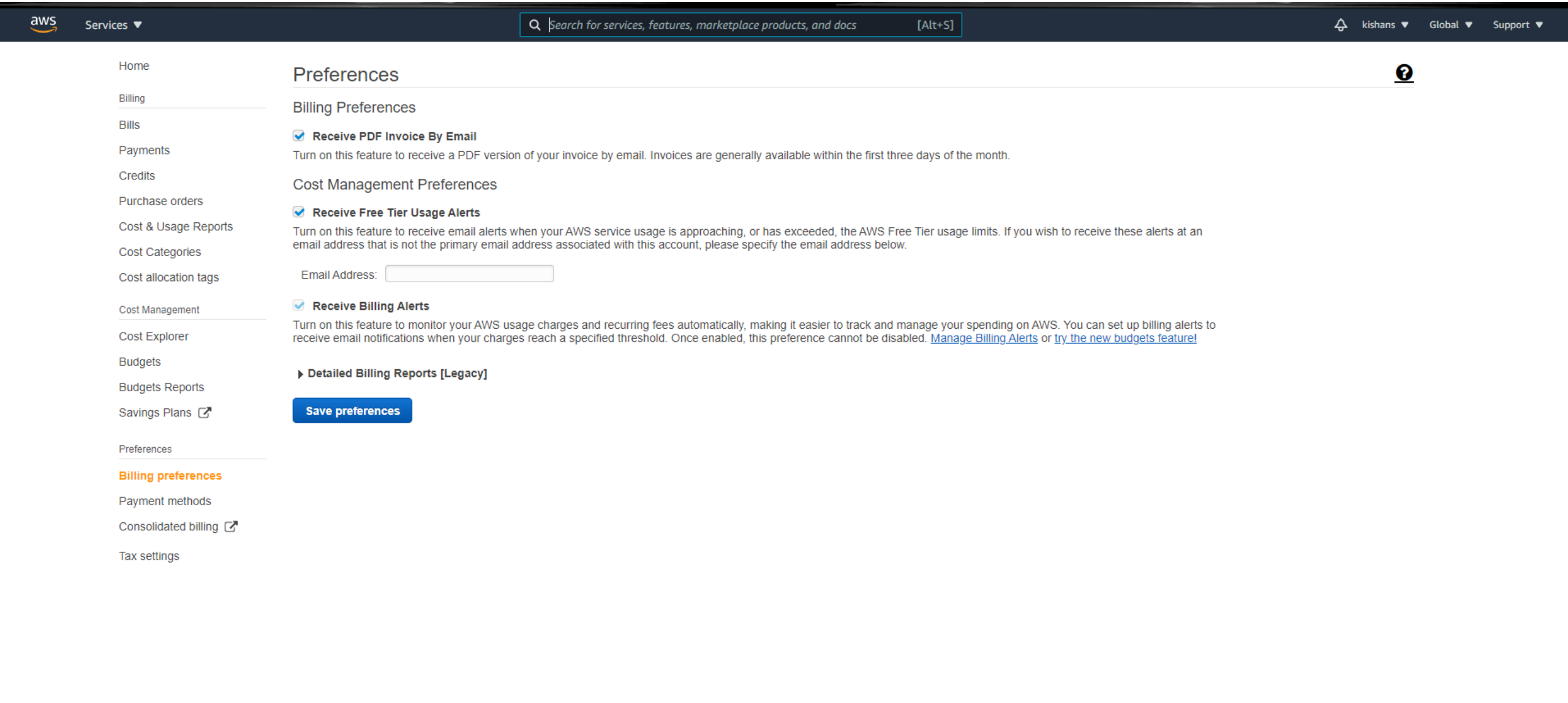
Here are a few easy ways to get started:

Learn with tutorials and guides
Get Started »

Start building with the AWS console
Get Started »

Launch a simple cloud server
Get Started »

[IMPORTANT] SET BILLING PREFERENCES



AWS Management Console

Build a solution

Get started with simple wizards and automated workflows.

Launch a virtual machine
With EC2
2-3 minutes

Build a web app
With Elastic Beanstalk
6 minutes

Build using virtual servers
With Lightsail
1-2 minutes

Register a domain
With Route 53
3 minutes

Connect an IoT device
With AWS IoT
5 minutes

Start migrating to AWS
With AWS MGN
1-2 minutes

Start a development project
With CodeStar
5 minutes

Deploy a serverless microservice
With Lambda, API Gateway
2 minutes

Host a static web app
With AWS Amplify Console
5 minutes

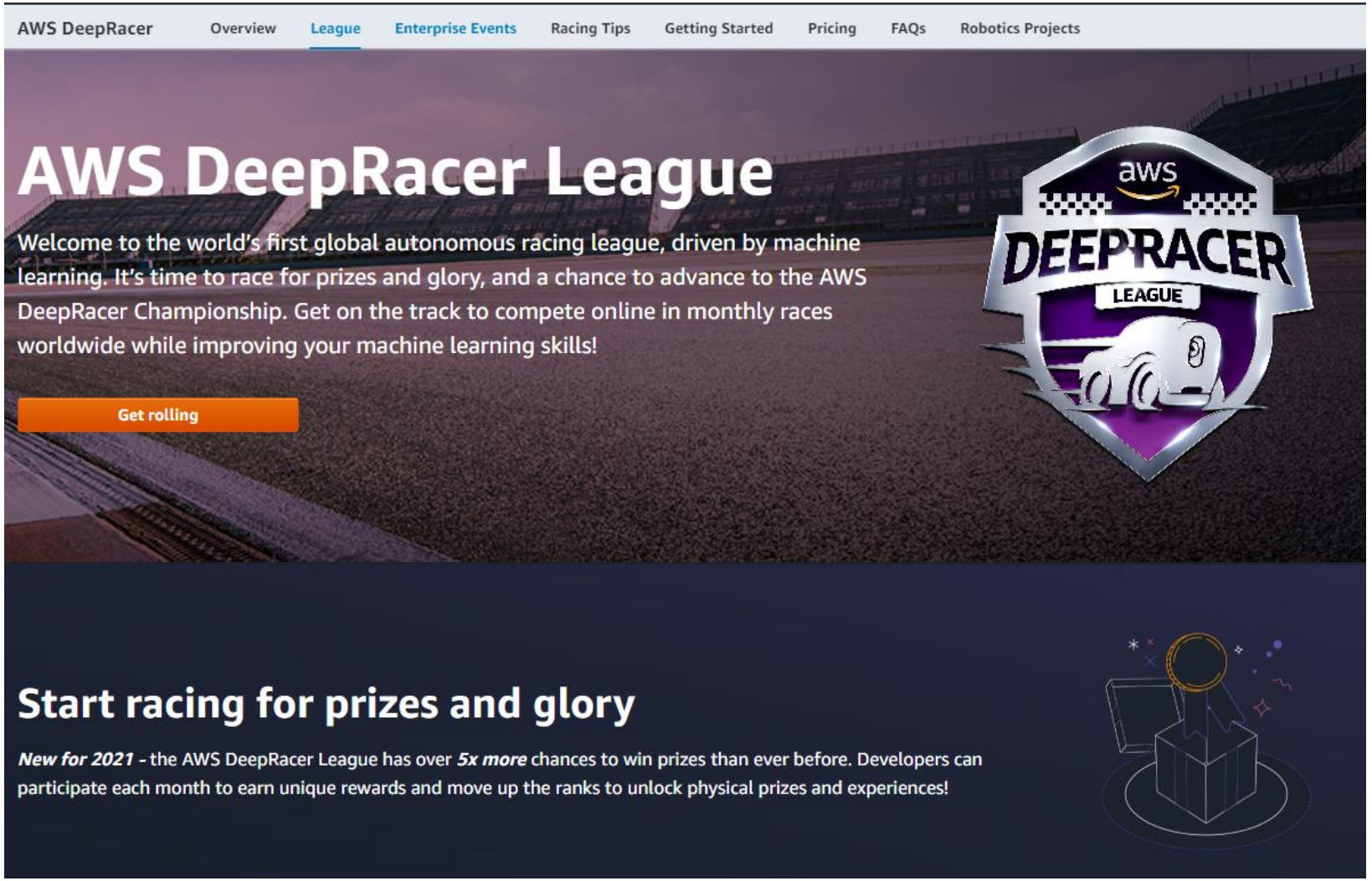
AWS Developer Tools

AWS Developer Tools

Easily develop applications on AWS in the programming language of your choice with familiar tools.

Developer Tool	Description
Web Console	Simple web interface for Amazon Web Services
Command Line Tool	Control your AWS services from the command line and automate service management with scripts
Integrated Development Environment (IDE)	Write, run, debug, and deploy applications on AWS using familiar Integrated Development Environments (IDE)
Software Development Kit (SDK)	Simplify coding with language-specific abstracted APIs for AWS services
Infrastructure as Code	Define cloud infrastructure using familiar programming languages

AWS DeepRacer League



SSH

- SSH, or Secure Shell, is a remote administration protocol that allows users to control and modify their remote servers over the Internet.

- It provides a mechanism for authenticating a remote user, transferring inputs from the client to the host, and relaying the output back to the client.

- If you're using Linux or Mac, then using SSH is very simple. If you use Windows, you will need to utilize an SSH client to open SSH connections. The most popular SSH client is PuTTY.

User-Friendly FTP - FileZilla

- If you want a more user-friendly tool to transfer data, FileZilla is a good choice.

- It is free, it supports Windows/Linux/Mac systems, and it has a good user interface. It supports FTP, SFTP and other file transfer protocols.

Running Jupyter Notebook on an EC2 Server

- Step 1: Create an EC2 Instance
- Step 2: Customize your EC2 server for Jupyter
- Step 3: Connecting to your EC2
- Step 4: Installing Jupyter Notebook
- Step 5: Configuring Jupyter Notebook's Path
- Step 6: Configuring Jupyter Notebook settings
- Step 7: Create a directory for your notebooks
- Step 8: Connecting to your EC2 Jupyter Server

Read more at this link