# Instructions to install and run the app on Amazon EC2 (Linux)

## Launch an Instance:

**Choose Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type** - ami-0ff8a91507f77f867

(Or equivalent)

Type = T2.micro or better (t2.medium)

Create a key file and save it to your local machine, in order to connect to the running instance.

Using SSH, log into the instance you just created

ssh -i "<your\_key\_file>" ec2-user@<your\_EC2\_instance>.compute-1.amazonaws.com

# Commands to run to prepare the EC2 (Linux) instance to run the USDA app

## Install Java 1.8

sudo yum update

sudo yum install java-1.8.0-openjdk.x86\_64

sudo yum remove java-1.7.0-openjdk.x86\_64

## Installing R, with needed libraries

sudo yum install R-core-devel.x86\_64 R-devel.x86\_64

sudo yum install -y R

sudo yum install gcc.noarch

sudo yum remove libgcc64.x86\_64 libgcc72.x86\_64

sudo yum install gcc48-c++.x86\_64 gcc48-gfortran.x86\_64

sudo yum install libquadmath.x86\_64

***this will take a while***

sudo R -e "install.packages('caret', dependencies=TRUE, repos='http://cran.us.r-project.org')"

sudo R -e "install.packages('ggplot2', dependencies=TRUE, repos='http://cran.us.r-project.org')"

sudo R -e "install.packages('ggcorrplot', dependencies=TRUE, repos='http://cran.us.r-project.org')"

## Installing Tomcat - configure Tomcat to listen to port 80 and switch user to root,

sudo yum install tomcat80.noarch tomcat80-admin-webapps.noarch

sudo vi /usr/share/tomcat8/conf/tomcat-users.xml

***find and edit property TOMCAT\_USER="root"***

sudo vi /usr/share/tomcat8/conf/server.xml

***find and edit this line so that the port = 80***

<Connector port="80" protocol="HTTP/1.1"

connectionTimeout="20000"

redirectPort="8443" />

sudo service tomcat8 start

## Install HTTPD & configure it to listen to 8080

sudo yum install -y httpd24

sudo vi /etc/httpd/conf/httpd.conf

***find and edit this line***

Listen 8080

sudo service tomcat8 start

sudo service httpd start

exit

# Upload ROOT.war file, deploy to webapps directory

sftp -i "<your\_key\_file>" ec2-user@<your\_ec2\_instance>.compute-1.amazonaws.com

put ROOT.war

exit

**Using SSH, log into the instance**

ssh -i "<your\_key\_file>" ec2-user@<your\_ec2\_instance>.compute-1.amazonaws.com

chmod 777 ROOT.war

sudo cp ./ROOT.war /usr/share/tomcat8/webapps

***confirm its deployed***

sudo tail -f /usr/share/tomcat8/logs/catalina.out

# Copy CSV files from the WAR deployment over to /var/www/html

cd /usr/share/tomcat8/webapps/ROOT/WEB-INF/classes/

sudo cp \*.csv /var/www/html

***Configure the security group for your EC2 instance to allow TCP traffic to PORTS 80 and 8080***

View the USDA App:

http://<your\_ec2\_instance>.compute-1.amazonaws.com/