.8.0_144\jre\lib\ext\dnsns.jar;C:\Program Files\Java\jdk1.8.0_144\jre\lib\ext\jaccess.jar;C:\Program Files\Java xiyang\.ivy2\cache\oro\oro\jars\oro-2.0.8.jar;C:\Users\xiyang\.ivy2\cache\org.xerial.snappy\snappy-java\bundles breeze_2.11-0.13.1.jar;C:\Users\xiyang\.ivy2\cache\org.scalanlp\breeze-macros_2.11\jars\breeze-macros_2.11-0.13 scala-reflect\jars\scala-reflect-2.11.8.jar;C:\Users\xiyang\.ivy2\cache\org.scala-lang\scala-library\jars\scala ext\access-bridge-64.jar;C:\Program Files\Java\jdk1.8.0_144\jre\lib\ext\cldrdata.jar;C:\Program Files\Java\jdk1 Economy\target\scala-2.11\classes;C:\Users\xiyang\.ivy2\cache\aopalliance\aopalliance\jars\aopalliance-1.0.jar; \snappy-java-1.1.2.6.jar;C:\Users\xiyang\.ivy2\cache\org.typelevel\macro-compat_2.11\jars\macro-compat_2.11-1.1 .1.jar;C:\Users\xiyang\.ivy2\cache\org.typelevel\machinist_2.11\jars\machinist_2.11-0.6.1.jar;C:\Users\xiyang\. ivy2\cache\org.tukaani\xz\jars\xz-1.0.jar;C:\Users\xiyang\.ivy2\cache\org.spire-math\spire_2.11\jars\spire_2.11 .1.jar;C:\Users\xiyang\.ivy2\cache\org.scalafx\scalafx_2.11\jars\scalafx_2.11-8.0.102-R11.jar;C:\Users\xiyang\. Program Files\Java\jdk1.8.0_144\jre\lib\ext\sunjce_provider.jar;C:\Program Files\Java\jdk1.8.0_144\jre\lib\ext\ jre\lib\ext\zipfs.jar;C:\Program Files\Java\jdk1.8.0_144\jre\lib\javaws.jar;C:\Program Files\Java\jdk1.8.0_144\ jre\lib\jce.jar;C:\Program Files\Java\jdk1.8.0_144\jre\lib\jfr.jar;C:\Program Files\Java\jdk1.8.0_144\jre\lib\ -library-2.11.8.jar;C:\Users\xiyang\.ivy2\cache\org.scala-lang\scala-compiler\jars\scala-compiler-2.11.8.jar;C -0.13.0.jar;C:\Users\xiyang\.ivy2\cache\org.spire-math\spire-macros_2.11\jars\spire-macros_2.11-0.13.0.jar;C:\ ivy2\cache\org.objenesis\objenesis\jars\objenesis-2.1.jar;C:\Users\xiyang\.ivy2\cache\org.mortbay.jetty\jettycharsets.jar;C:\Program Files\Java\jdk1.8.0_144\jre\lib\deploy.jar;C:\Program Files\Java\jdk1.8.0_144\jre\lib\ sunmscapi.jar;C:\Program Files\Java\jdk1.8.0_144\jre\lib\ext\sunpkcs11.jar;C:\Program Files\Java\jdk1.8.0_144\ management-agent.jar;C:\Program Files\Java\jdkī.8.0_144\jre\lib\plugin.jar;C:\Program Files\Java\jdk1.8.0_144\ Users\xiyang\.ivy2\cache\org.spark-project.spark\unused\jars\unused-1.0.0.jar;C:\Users\xiyang\.ivy2\cache\org. sonatype.sisu.inject\cglib\jars\cglib-2.2.1-v20090111.jar;C:\Users\xiyang\.ivy2\cache\org.slf4j\s1f4j-log4j12\ ivy2\cache\org.scala-lang.modules\scala-xml_2.11\bundles\scala-xml_2.11-1.0.4.jar;C:\Users\xiyang\.ivy2\cache\ org.scala-lang.modules\scala-parser-combinators_2.11\bundles\scala-parser-combinators_2.11-1.0.4.jar;C:\Users\ Users\xiyang\`ivy2\cache\org.slf4j\jul-to-slf4j\jars\jul-to-slf4j-1.7.16.jar;C:\Users\xiyang\.ivy2\cache\org. slf4j\jcl-over-slf4j\jars\jcl-over-slf4j-1.7.16.jar;C:\Users\xiyang\.ivy2\cache\org.scalanlp\breeze_2.11\jars\ :\Users\xiyang\.ivy2\cache\org.roaringbitmap\RoaringBitmap\bundles\RoaringBitmap-0.5.11.jar;C:\Users\xiyang\. "-javaagent:E:\IntelliJ IDEA 2017.2.6\lib\idea_rt.jar=56999:E:\ C:\Users\xiyang\.ivy2\cache\xmlenc\xmlenc\jars\xmlenc-0.52.jar;C:\Users\xiyang\.ivy2\cache\xml-apis\xml-apis\ jre\lib\resources.jar;C:\Program Files\Java\jdk1.8.0_144\jre\lib\rt.jar;C:\Users\xiyang\Desktop\cap5771\proj\ |ackson_2.11-3.2.11.jar;C:\Users\xiyang\.ivy2\cache\org.json4s\json4s-core_2.11\jars\json4s-core_2.11-3.2.11. jdk1.8.0_144\jre\lib\ext\jfxrt.jar;C:\Program Files\Java\jdk1.8.0_144\jre\lib\ext\localedata.jar;C:\Program (Files\Java\jdk1.8.0_144\jre\lib\ext\nashorn.jar;C:\Program Files\Java\jdk1.8.0_144\jre\lib\ext\sunec.jar;C:\ jar;C:\Users\xiyang\.ivy2\cache\org.json4s\json4s-ast_2.11\jars\json4s-ast_2.11-3.2.11.jar;C:\Users\xiyang\. xiyang\.ivy2\cache\org.scala-lang\scalap\jars\scalap-2.11.8.jar;C:\Users\xiyang\.ivy2\cache\org.scala-lang\ jars\s1f4j-log4j12-1.7.16.jar;C:\Users\xiyang\.ivy2\cache\org.s1f4j\s1f4j-api\jars\s1f4j-api-1.7.16.jar;C:\ fxswt.jar;C:\Program Files\Java\jdk1.8.0_144\jre\lib\jsse.jar;C:\Program Files\Java\jdk1.8.0_144\jre\lib\ |ars\xml-apis-1.3.04.jar;C:\Users\xiyang\.ivy2\cache\xerces\xercesImpl\jars\xercesImpl-2.9.1.jar;C:\Users\ Intellij IDEA 2017.2.6\bin" -Dfile.encoding=UTF-8 -classpath "C:\Program Files\Java\jdk1.8.0_144\jre\lib\ util\jars\jetty-util-6.1.26.jar;C:\Users\xiyang\.ivy2\cache\org.json4s\json4s-jackson_2.11\jars\json4s-"C:\Program Files\Java\jdk1.8.0_144\bin\java"

locator\jars\hk2-locator-2.4.0-b34.jar;C:\Users\xiyang\.ivy2\cache\org.glassfish.hk2\hk2-api\jars\hk2-api-2.4.0 org.apache.spark\spark-network-common_2.11\jars\spark-network-common_2.11-2.2.0.jar;C:\Users\xiyang\.ivy2\cache catalyst_2.11-2.2.0.jar;C:\Users\xiyang\.ivy2\cache\org.apache.parquet\parquet-jackson\jars\parquet-jackson-1.8 jars\pmml-model-1.2.15.jar;C:\Users\xiyang\.ivy2\cache\org.javassist\javassist\bundles\javassist-3.18.1-GA.jar; ersey.containers\jersey-container-servlet\jars\jersey-container-servlet-2.22.2.jar;C:\Users\xiyang\.ivy2\cache Users\xiyang\.ivy2\cache\org.codehaus.jackson\jackson-core-as1\jars\jackson-core-as1-1.9.13.jar;C:\Users\xiyang spark-unsafe_2.11-2.2.0.jar;C:\Users\xiyang\.ivy2\cache\org.apache.spark\spark-tags_2.11\jars\spark-tags_2.11-2 C:\Users\xiyang\.ivy2\cache\org.apache.spark\spark-sql_2.11\jars\spark-sql_2.11-2.2.0.jar;C:\Users\xiyang\.ivy2 org.apache.spark\spark-mllib_2.11\jars\spark-mllib_2.11-2.2.0.jar;C:\Users\xiyang\.ivy2\cache\org.apache.spark ersey-client\jars\jersey-client-2.22.2.jar;C:\Users\xiyang\.ivy2\cache\org.glassfish.jersey.containers\jerseycontainer-servlet-core\jars\jersey-container-servlet-core-2.22.2.jar;C:\Users\xiyang\.ivy2\cache\org.glassfish. .2.0.jar;C:\Users\xiyang\.ivy2\cache\org.apache.spark\spark-streaming_2.11\jars\spark-streaming_2.11-2.2.0.jar; xiyang\.ivy2\cache\org.apache.parquet\parquet-format\jars\parquet-format-2.3.1.jar;C:\Users\xiyang\.ivy2\cache\ :\Users\xiyang\.ivy2\cache\org.codehaus.jettison\jettison\bundles\jettison-1.1.jar;C:\Users\xiyang\.ivy2\cache\ cache\org.glassfish.hk2\osgi-resource-locator\jars\osgi-resource-locator-1.0.1.jar;C:\Users\xiyang\.ivy2\cache\ org.glassfish.hk2\hk2-utils\jars\hk2-utils-2.4.0-b34.jar;C:\Users\xiyang\.ivy2\cache\org.glassfish.hk2\hk2graphx_2.11\jars\spark-graphx_2.11-2.2.0.jar;C:\Users\xiyang\.ivy2\cache\org.apache.spark\spark-core_2.11\jars\ asl-1.9.13.jar;C:\Users\xiyang\.ivy2\cache\org.codehaus.jackson\jackson-jaxrs\jars\jackson-jaxrs-1.9.13.jar;C:\ -b34.jar;C:\Users\xiyang\.ivy2\cache\org.fusesource.leveldbjni\leveldbjni-all\bundles\leveldbjni-all-1.8.jar;C jackson-xc-1.9.13.jar;C:\Users\xiyang\.ivy2\cache\org.codehaus.jackson\jackson-mapper-as1\jars\jackson-mapper-C:\Users\xiyang\.ivy2\cache\org.htrace\htrace-core\jars\htrace-core-3.0.4.jar;C:\Users\xiyang\.ivy2\cache\org. ivy2\cache\org.jpmm1\pmm1-schema\jars\pmm1-schema-1.2.15.jar;C:\Users\xiyang\.ivy2\cache\org.jpmm1\pmm1-mode1\ ersey.core\jersey-common\jars\jersey-common-2.22.2.jar;C:\Users\xiyang\.ivy2\cache\org.glassfish.jersey.core\ cache\org.glassfish.hk2.external\javax.inject\jars\javax.inject-2.4.0-b34.jar;C:\Users\xiyang\.ivy2\cache\org. apache.spark\spark-network-shuffle_2.11\jars\spark-network-shuffle_2.11-2.2.0.jar;C:\Users\xiyang\.ivy2\cache\ glassfish.hk2.external\aopalliance-repackaged\jars\aopalliance-repackaged-2.4.0-b34.jar;C:\Users\xiyang\.ivy2\ shaded\bundles\xbean-asm5-shaded-4.4.jar;C:\Users\xiyang\.ivy2\cache\org.apache.spark\spark-unsafe_2.11\jars\ apache.zookeeper\zookeeper\jars\zookeeper-3.4.6.jar;C:\Users\xiyang\.ivy2\cache\org.apache.xbean\xbean-asm5glassfish.jersey.core\jersey-server\jars\jersey-server-2.22.2.jar;C:\Users\xiyang\.ivy2\cache\org.glassfish. org.glassfish.jersey.bundles.repackaged\jersey-guava\bundles\jersey-guava-2.22.2.jar;C:\Users\xiyang\.ivy2\ .2.jar;C:\Users\xiyang\.ivy2\cache\org.apache.parquet\parquet-hadoop\jars\parquet-hadoop-1.8.2.jar;C:\Users\ \cache\org.apache.spark\spark-sketch_2.11\jars\spark-sketch_2.11-2.2.0.jar;C:\Users\xiyang\.ivy2\cache\org. glassfish.jersey.media\jersey-media-jaxb\jars\jersey-media-jaxb-2.22.2.jar;C:\Users\xiyang\.ivy2\cache\org. spark-mllib-local_2.11\jars\spark-mllib-local_2.11-2.2.0.jar;C:\Users\xiyang\.ivy2\cache\org.apache.spark\ \.ivy2\cache\org.bouncycastle\bcprov-jdk15on\jars\bcprov-jdk15on-1.51.jar;C:\Users\xiyang\.ivy2\cache\org. compiler\jars\commons-compiler-3.0.0.jar;C:\Users\xiyang\.ivy2\cache\org.codehaus.jackson\jackson-xc\jars\ spark-launcher_2.11\jars\spark-launcher_2.11-2.2.0.jar;C:\Users\xiyang\.ivy2\cache\org.apache.spark\sparkorg.codehaus.janino\janino\jars\janino-3.0.0.jar;C:\Users\xiyang\.ivy2\cache\org.codehaus.janino\commonsspark-core_2.11-2.2.0.jar;C:\Users\xiyang\.ivy2\cache\org.apache.spark\spark-catalyst_2.11\jars\spark-

column\jars\parquet-column-1.8.2.jar;C:\Users\xiyang\.ivy2\cache\org.apache.ivy\ivy\jars\ivy-2.4.0.jar;C:\Users hadoop-mapreduce-client-shuffle-2.6.5.jar;C:\Users\xiyang\.ivy2\cache\org.apache.hadoop\hadoop-mapreduce-client hadoop-mapreduce-client-core\jars\hadoop-mapreduce-client-core-2.6.5.jar;C:\Users\xiyang\.ivy2\cache\org.apache ar;C:\Users\xiyang\.ivy2\cache\org.apache.hadoop\hadoop-annotations\jars\hadoop-annotations-2.6.5.jar;C:\Users apache.httpcomponents\httpclient\jars\httpclient-4.3.6.jar;C:\Users\xiyang\.ivy2\cache\org.apache.hadoop\hadoop ivy2\cache\org.apache.curator\curator-recipes\bundles\curator-recipes-2.6.0.jar;C:\Users\xiyang\.ivy2\cache\org xiyang\.ivy2\cache\org.apache.httpcomponents\httpcore\jars\httpcore-4.3.3.jar;C:\Users\xiyang\.ivy2\cache\org. hadoop-yarn-common\jars\hadoop-yarn-common-2.6.5.jar;C:\Users\xiyang\.ivy2\cache\org.apache.hadoop\hadoop-yarncurator\curator-client\bundles\curator-client-2.6.0.jar;C:\Users\xiyang\.ivy2\cache\org.apache.commons\commonsxiyang\.ivy2\cache\log4j\log4j\bundles\log4j-1.2.17.jar;C:\Users\xiyang\.ivy2\cache\jline\jline\jars\jline-0.9. xiyang\.ivy2\cache\org.apache.directory.server\apacheds-kerberos-codec\bundles\apacheds-kerberos-codec-2.0.0cache\org.apache.hadoop\hadoop-mapreduce-client-app\jars\hadoop-mapreduce-client-app-2.6.5.jar;C:\Users\xiyang ars\hadoop-client-2.6.5.jar;C:\Users\xiyang\.ivy2\cache\org.apache.hadoop\hadoop-auth\jars\hadoop-auth-2.6.5. M15.jar;C:\Users\xiyang\.ivy2\cache\org.apache.directory.server\apacheds-i18n\bundles\apacheds-i18n-2.0.0-M15. hadoop\hadoop-common\jars\hadoop-common-2.6.5.jar;C:\Users\xiyang\.ivy2\cache\org.apache.hadoop\hadoop-client\ Users\xiyang\.ivy2\cache\org.apache.commons\commons-compress\jars\commons-compress-1.4.1.jar;C:\Users\xiyang\. avro-ipc-1.7.7.jar;C:\Users\xiyang\.ivy2\cache\org.apache.avro\jars\avro-1.7.7.jar;C:\Users\xiyang\.ivy2\ arpack_combined_all\jars\arpack_combined_all-0.1.jar;C:\Users\xiyang\.ivy2\cache\net.sf.py4j\py4j\jars\py4j-0. .apache.curator\curator-framework\bundles\curator-framework-2.6.0.jar;C:\Users\xiyang\.ivy2\cache\org.apache. math3\jars\commons-math3-3.4.1.jar;C:\Users\xiyang\.ivy2\cache\org.apache.commons\commons-lang3\jars\commons-.ivy2\cache\org.apache.hadoop\hadoop-hdfs\jars\hadoop-hdfs-2.6.5.jar;C:\Users\xiyang\.ivy2\cache\org.apache. net.razorvine\pyrolite\jars\pyrolite-4.13.jar;C:\Users\xiyang\.ivy2\cache\net.jpountz.1z4\lz4\jars\lz4-1.3.0. 10.4.jar;C:\Users\xiyang\.ivy2\cache\net.sf.opencsv\opencsv\jars\opencsv-2.3.jar;C:\Users\xiyang\.ivy2\cache\ apache.avro\avro-ipc\jars\avro-ipc-1.7.7-tests.jar;C:\Users\xiyang\.ivy2\cache\org.apache.avro\avro-ipc\jars\ jar;C:\Users\xiyang\.ivy2\cache\net.java.dev.jets3t\jets3t\jārs\jets3t-0.9.3.jār;C:\Users\xiyang\.ivy2\cache\ ıadoop-yarn-api-2.6.5.jar;C:\Users\xiyang\.ivy2\cache\org.apache.hadoop\hadoop-mapreduce-client-shuffle\jars\ cache\org.ant1r\ant1r4-runtime\jars\ant1r4-runtime-4.5.3.jar;C:\Users\xiyang\.ivy2\cache\net.sourceforge.f2j\ lang3-3.5.jar;C:\Users\xiyang\.ivy2\cache\org.apache.commons\commons-crypto\jars\commons-crypto-1.0.0.jar;C:\ parquet\parquet-common\jars\parquet-common-1.8.2.jar;C:\Users\xiyang\.ivy2\cache\org.apache.parquet\parquetclient\jars\hadoop-yarn-client-2.6.5.jar;C:\Users\xiyang\.ivy2\cache\org.apache.hadoop\hadoop-yarn-api\jars\ xiyang\.ivy2\cache\org.apache.directory.api\api-asn1-api\bundles\api-asn1-api-1.0.0-M20.jar;C:\Users\xiyang\ net.iharder\base64\jars\base64-2.3.8.jar;C:\Users\xiyang\.ivy2\cache\mx4j\mx4j\jars\mx4j-3.0.2.jar;C:\Users\ 94.jar;C:\Users\xiyang\.ivy2\cache\javax.xml.stream\stax-api\jars\stax-api-1.0-2.jar;C:\Users\xiyang\.ivy2\ -yarn-server-common\jars\hadoop-yarn-server-common-2.6.5.jar;C:\Users\xiyang\.ivy2\cache\org.apache.hadoop\ .hadoop\hadoop-mapreduce-client-common\jars\hadoop-mapreduce-client-common-2.6.5.jar;C:\Users\xiyang\.ivy2\ org.apache.parquet\parquet-encoding\jars\parquet-encoding-1.8.2.jar;C:\Users\xiyang\.ivy2\cache\org.apache. ivy2\cache\org.apache.avro\avro-mapred\jars\avro-mapred-1.7.7-hadoop2.jar;C:\Users\xiyang\.ivy2\cache\org. -jobclient\jars\hadoop-mapreduce-client-jobclient-2.6.5.jar;C:\Users\xiyang\.ivy2\cache\org.apache.hadoop\ jar;C:\Users\xiyang\.ivy2\cache\org.apache.directory.api\api-util\bundles\api-util-1.0.0-M20.jar;C:\Users\

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```
17/12/09 15:03:28 INFO BlockManagerMaster: Registering BlockManager BlockManagerId(driver, 192.168.200.1, 57045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10 17/12/09 15:03:26 INFO SecurityManager: SecurityManager: authentication disabled; ui acls disabled; users with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        view permissions: Set(xiyang); groups with view permissions: Set(); users with modify permissions: Set(xiyang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17/12/09 15:03:27 INFO DiskBlockManager: Created local directory at C:\Users\xiyang\AppData\Local\Temp\blockmgr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17/12/09 15:03:28 INFO BlockManagerMasterEndpoint: Registering block manager 192.168.200.1:57045 with 1994.1 MB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RAM, BlockManagerId(driver, 192.168.200.1, 57045, None)
17/12/09 15:03:28 INFO BlockManagerMaster: Registered BlockManager BlockManagerId(driver, 192.168.200.1, 57045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17/12/09 15:03:27 INFO BlockManagerMasterEndpoint: Using org.apache.spark.storage.DefaultTopologyMapper for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17/12/09 15:03:28 INFO BlockManager: Using org.apache.spark.storage.RandomBlockReplicationPolicy for block
                                                                                                  17/12/09 15:03:26 WARN NativeCodeLoader: Unable to load native-hadoop library for your platform... using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17/12/09 15:03:28 INFO SparkUI: Bound SparkUI to 0.0.0.0, and started at http://192.168.200.1:4040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17/12/09 15:03:28 INFO Utils: Successfully started service 'org.apache.spark.network.netty.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17/12/09 15:03:28 INFO NettyBlockTransferService: Server created on 192.168.200.1:57045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17/12/09 15:03:27 INFO Utils: Successfully started service 'sparkDriver' on port 57023
                                                                                                                                                                                                    17/12/09 15:03:26 INFO SparkContext: Submitted application: PreprocessUnemploymentRate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17/12/09 15:03:27 INFO Utils: Successfully started service 'SparkUI' on port 4040.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17/12/09 15:03:27 INFO BlockManagerMasterEndpoint: BlockManagerMasterEndpoint up
Using Spark's default log4j profile: org/apache/spark/log4j-defaults.properties
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17/12/09 15:03:27 INFO MemoryStore: MemoryStore started with capacity 1994.1 MB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17/12/09 15:03:28 INFO Executor: Starting executor ID driver on host localhost
                                                                                                                                                                                                                                                                                                                                                                                                               17/12/09 15:03:26 INFO SecurityManager: Changing modify acls groups to:
                                                                                                                                                                                                                                                                                                                17/12/09 15:03:26 INFO SecurityManager: Changing modify acls to: xiyang
                                                                                                                                                                                                                                                            17/12/09 15:03:26 INFO SecurityManager: Changing view acls to: xiyang
                                                                                                                                                                                                                                                                                                                                                                 17/12/09 15:03:26 INFO SecurityManager: Changing view acls groups to:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17/12/09 15:03:27 INFO SparkEnv: Registering OutputCommitCoordinator
                                       17/12/09 15:03:25 INFO SparkContext: Running Spark version 2.2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17/12/09 15:03:27 INFO SparkEnv: Registering BlockManagerMaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17/12/09 15:03:27 INFO SparkEnv: Registering MapOutputTracker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NettyBlockTransferService' on port 57045.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ); groups with modify permissions: Set()
                                                                                                                                                   builtin-java classes where applicable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -61f600ef-4d13-42c6-8fb8-3e81d6cb889c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               getting topology information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               replication policy
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17/12/09 15:03:28 INFO SharedState: Setting hive.metastore.warehouse.dir ('null') to the value of spark.sql.

17/12/09 15:03:28 INFO BlockManager: Initialized BlockManager: BlockManagerId(driver, 192.168.200.1, 57045,

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17/12/09 15:03:28 INFO SharedState: Warehouse path is 'file:/C:/Users/xiyang/Desktop/cap5771/proj/Economy/spark
                                                                                                                              17/12/09 15:03:45 WARN BLAS: Failed to load implementation from: com.github.fommil.netlib.NativeSystemBLAS
                                                                                                                                                      17/12/09 15:03:45 WARN BLAS: Failed to load implementation from: com.github.fommil.netlib.NativeRefBLAS
                                                                                                                                                                                 17/12/09 15:03:45 WARN BlockManager: Block rdd_104_1 already exists on this machine; not re-adding it
                                                                                                                                                                                                           17/12/09 15:03:45 WARN BlockManager: Block rdd_129_1 already exists on this machine; not re-adding it
                                                                                                                                                                                                                                                               objectiveHistory: [0.500000000000000001,0.4902514484531376,0.47926815071049716,0.47645517926155284,0.
                                                                                                                                                                                                                                                                                         475061224514633,0.47505115571467965,0.47505074332574015,0.4750507431861518,0.47505074317336854]
                                                                          17/12/09 15:03:29 INFO StateStoreCoordinatorRef: Registered StateStoreCoordinator endpoint
warehouse.dir ('file:/C:/Users/xiyang/Desktop/cap5771/proj/Economy/spark-warehouse/'
                                                                                                                                                                                                                                        Coefficients: [1496.4765402668827,3.1006436472582695] Intercept: -89317.97157181425
                                                                                                                                                                                                                                                                                                                                                                                                    ************** Multilayer perceptron classifier ************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ***********random forest*********
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     features
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ****** Logistic Regression *******
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               *************************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ***********************
                                                                                                      ****** Linear Regression *******
                                                                                                                                                                                                                                                                                                                                                                         **********************
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Test accuracy = 0.00267379679144385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Precision = 7.149189281935428E-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          F1 Score = 1.4260249554367201E-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Precision = 0.16531742173453404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F1 Score = 0.1447922113016544
                                                                                                                                                                                                                                                                                                                                                                                                                            Accuracy: 0.17379679144385027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Recall = 0.00267379679144385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Recall = 0.17379679144385027
                                                                                                                                                                                                                                                                                                                                              r2: 0.049899864627175994
                                                                                                                                                                                                                                                                                                                      RMSE: 96151.74709792313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |predictedLabel|label
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66 only showing	ving top 5 rows
29	
Test	accuracy = 0.23796791443850268
	Summary Statistics
	Precision = 0.2614812996699072
Recall =	0.23796791443850268
F1 Score	= 0.17736917338484193
*	******************
74 done	
75 SwiftVis2	autosep string = 1.51040
	autosep string = 7.19044
77 SwiftVis2	autosep string = 1.51040
78 SwiftVis2	autosep string = 7.19044
79 SwiftVis2	autosep string = 1.51040
	autosep string = 7
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	autosep string = 7.19044
	autosep string = 4.12948
88 SwiftVis2	autosep string = 1.41096
89 SwiftVis2	autosep string = 4.12948
90 SwiftVis2	autosep string = 1.41096
Process	finished with exit code 0