

```
In [4]: # install.packages("dummies")
library(dummies)
```

dummies-1.5.6 provided by Decision Patterns

```
In [5]: loan <- read.csv("kiva_loans.csv")
```

```
In [6]: df = loan[, !names(loan) %in% c("date", "tags", "id", "funded_amount", "use", "country", "region", "currency")]
```

```
In [7]: # for checking
head(df,5)
```

A data.frame: 5 × 8

loan_amount	activity	sector	country_code	term_in_months	lender_count	borrower_genders	repayment_interval
<dbl>	<fct>	<fct>	<fct>	<dbl>	<int>	<fct>	<fct>
300	Fruits & Vegetables	Food	PK	12	12	female	irregular
575	Rickshaw	Transportation	PK	11	14	female, female	irregular
150	Transportation	Transportation	IN	43	6	female	bullet
200	Embroidery	Arts	PK	11	8	female	irregular
400	Milk Sales	Food	PK	14	16	female	monthly

```
In [8]: # for checking
names(df)
```

'loan_amount' 'activity' 'sector' 'country_code' 'term_in_months' 'lender_count' 'borrower_genders' 'repayment_interval'

```
In [9]: df = dummy.data.frame(df, names = c("country_code", "activity", "sector", "repayment_interval"), sep = "_")
```

Warning message in model.matrix.default(~x - 1, model.frame(~x - 1), contrasts = FALSE):
 "non-list contrasts argument ignored"
 Warning message in model.matrix.default(~x - 1, model.frame(~x - 1), contrasts = FALSE):
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 "non-list contrasts argument ignored"
 Warning message in model.matrix.default(~x - 1, model.frame(~x - 1), contrasts = FALSE):
 "non-list contrasts argument ignored"

```
In [10]: # for checking
head(df,5)
```

A data.frame: 5 × 273

loan_amount	activity_Adult Care	activity_Agriculture	activity_Air Conditioning	activity_Animal Sales	activity_Aquaculture	activity_Arts	activity_Auto Repair	activity
<dbl>	<int>	<int>	<int>	<int>	<int>	<int>	<int>	
300	0	0	0	0	0	0	0	
575	0	0	0	0	0	0	0	
150	0	0	0	0	0	0	0	
200	0	0	0	0	0	0	0	
400	0	0	0	0	0	0	0	

```
In [11]: # for checking
names(df)
```

```
'loan_amount' 'activity_Adult Care' 'activity_Agriculture' 'activity_Air Conditioning' 'activity_Animal Sales'
'activity_Aquaculture' 'activity_Arts' 'activity_Auto Repair' 'activity_Bakery' 'activity_Balut-Making' 'activity_Barber Shop'
'activity_Beauty Salon' 'activity_Beekeeping' 'activity_Beverages' 'activity_Bicycle Repair' 'activity_Bicycle Sales'
'activity_Blacksmith' 'activity_Bookbinding' 'activity_Bookstore' 'activity_Bricks' 'activity_Butcher Shop' 'activity_Cafe'
'activity_Call Center' 'activity_Carpentry' 'activity_Catering' 'activity_Cattle' 'activity_Celebrations' 'activity_Cement'
'activity_Cereals' 'activity_Charcoal Sales' 'activity_Cheese Making' 'activity_Child Care' 'activity_Cleaning Services'
'activity_Cloth & Dressmaking Supplies' 'activity_Clothing' 'activity_Clothing Sales' 'activity_Cobbler'
'activity_Communications' 'activity_Computer' 'activity_Computers' 'activity_Construction' 'activity_Construction Supplies'
'activity_Consumer Goods' 'activity_Cosmetics Sales' 'activity_Crafts' 'activity_Dairy' 'activity_Decorations Sales'
'activity_Dental' 'activity_Education provider' 'activity_Electrical Goods' 'activity_Electrician' 'activity_Electronics Repair'
'activity_Electronics Sales' 'activity_Embroidery' 'activity_Energy' 'activity_Entertainment' 'activity_Event Planning'
'activity_Farm Supplies' 'activity_Farming' 'activity_Film' 'activity_Fish Selling' 'activity_Fishing' 'activity_Florist'
'activity_Flowers' 'activity_Food' 'activity_Food Market' 'activity_Food Production/Sales' 'activity_Food Stall'
'activity_Fruits & Vegetables' 'activity_Fuel/Firewood' 'activity_Funerals' 'activity_Furniture Making' 'activity_Games'
'activity_General Store' 'activity_Goods Distribution' 'activity_Grocery Store' 'activity_Hardware' 'activity_Health'
'activity_Higher education costs' 'activity_Home Appliances' 'activity_Home Energy' 'activity_Home Products Sales'
'activity_Hotel' 'activity_Internet Cafe' 'activity_Jewelry' 'activity_Knitting' 'activity_Land Rental'
```

```
In [14]: # for the sake of safety, just choose first 5 rows to run. I tested it an it success, but finally it takes t
# df1 = df
df1 = df[1:5,]
```

```
In [15]: df1$count_male = as.integer(rep(0, NROW(df1)))
df1$count_female = as.integer(rep(0, NROW(df1)))
for(i in 1:nrow(df1)) {
  factor = df1[i, "borrower_genders"]
  # print(string)
  string = as.character(factor)
  # print(string)
  string_list = as.list(strsplit(string, ', ')[1])
  # print(string_list)
  df1[i, 'count_male'] = sum(string_list == 'male')
  df1[i, 'count_female'] = sum(string_list == 'female')
}
```

```
In [16]: head(df1,5)
```

A data.frame: 5 × 275

loan_amount	activity_Adult Care	activity_Agriculture	activity_Air Conditioning	activity_Animal Sales	activity_Aquaculture	activity_Arts	activity_Auto Repair	activity
<dbl>	<int>	<int>	<int>	<int>	<int>	<int>	<int>	
300	0	0	0	0	0	0	0	
575	0	0	0	0	0	0	0	
150	0	0	0	0	0	0	0	
200	0	0	0	0	0	0	0	
400	0	0	0	0	0	0	0	

In [17]: `names(df1)`

```
'loan_amount' 'activity_Adult Care' 'activity_Agriculture' 'activity_Air Conditioning' 'activity_Animal Sales' 'activity_Aquaculture'
'activity_Arts' 'activity_Auto Repair' 'activity_Bakery' 'activity_Balut-Making' 'activity_Barber Shop' 'activity_Beauty Salon'
'activity_Beekeeping' 'activity_Beverages' 'activity_Bicycle Repair' 'activity_Bicycle Sales' 'activity_Blacksmith'
'activity_Bookbinding' 'activity_Bookstore' 'activity_Bricks' 'activity_Butcher Shop' 'activity_Cafe' 'activity_Call Center'
'activity_Carpentry' 'activity_Catering' 'activity_Cattle' 'activity_Celebrations' 'activity_Cement' 'activity_Cereals'
'activity_Charcoal Sales' 'activity_Cheese Making' 'activity_Child Care' 'activity_Cleaning Services'
'activity_Cloth & Dressmaking Supplies' 'activity_Clothing' 'activity_Clothing Sales' 'activity_Cobbler' 'activity_Communications'
'activity_Computer' 'activity_Computers' 'activity_Construction' 'activity_Construction Supplies' 'activity_Consumer Goods'
'activity_Cosmetics Sales' 'activity_Crafts' 'activity_Dairy' 'activity_Decorations Sales' 'activity_Dental'
'activity_Education provider' 'activity_Electrical Goods' 'activity_Electrician' 'activity_Electronics Repair'
'activity_Electronics Sales' 'activity_Embroidery' 'activity_Energy' 'activity_Entertainment' 'activity_Event Planning'
'activity_Farm Supplies' 'activity_Farming' 'activity_Film' 'activity_Fish Selling' 'activity_Fishing' 'activity_Florist'
'activity_Flowers' 'activity_Food' 'activity_Food Market' 'activity_Food Production/Sales' 'activity_Food Stall'
'activity_Fruits & Vegetables' 'activity_Fuel/Firewood' 'activity_Funerals' 'activity_Furniture Making' 'activity_Games'
'activity_General Store' 'activity_Goods Distribution' 'activity_Grocery Store' 'activity_Hardware' 'activity_Health'
'activity_Higher education costs' 'activity_Home Appliances' 'activity_Home Energy' 'activity_Home Products Sales'
'activity_Hotel' 'activity_Internet Cafe' 'activity_Jewelry' 'activity_Knitting' 'activity_Land Rental'
'activity_Landscaping / Gardening' 'activity_Laundry' 'activity_Liquor Store / Off-License' 'activity_Livestock'
'activity_Machine Shop' 'activity_Machinery Rental' 'activity_Manufacturing' 'activity_Medical Clinic' 'activity_Metal Shop'
'activity_Milk Sales' 'activity_Mobile Phones' 'activity_Mobile Transactions' 'activity_Motorcycle Repair'
'activity_Motorcycle Transport' 'activity_Movie Tapes & DVDs' 'activity_Music Discs & Tapes' 'activity_Musical Instruments'
'activity_Musical Performance' 'activity_Natural Medicines' 'activity_Office Supplies' 'activity_Paper Sales'
'activity_Party Supplies' 'activity_Patchwork' 'activity_Perfumes' 'activity_Personal Care Products' 'activity_Personal Expenses'
'activity_Personal Housing Expenses' 'activity_Personal Medical Expenses' 'activity_Personal Products Sales'
'activity_Pharmacy' 'activity_Phone Accessories' 'activity_Phone Repair' 'activity_Phone Use Sales' 'activity_Photography'
'activity_Pigs' 'activity_Plastics Sales' 'activity_Poultry' 'activity_Primary/secondary school costs' 'activity_Printing'
'activity_Property' 'activity_Pub' 'activity_Quarrying' 'activity_Recycled Materials' 'activity_Recycling'
'activity_Religious Articles' 'activity_Renewable Energy Products' 'activity_Restaurant' 'activity_Retail' 'activity_Rickshaw'
'activity_Secretarial Services' 'activity_Services' 'activity_Sewing' 'activity_Shoe Sales' 'activity_Souvenir Sales'
'activity_Spare Parts' 'activity_Sporting Good Sales' 'activity_Tailoring' 'activity_Taxi' 'activity_Technology' 'activity_Textiles'
'activity_Timber Sales' 'activity_Tourism' 'activity_Transportation' 'activity_Traveling Sales' 'activity_Upholstery'
'activity_Used Clothing' 'activity_Used Shoes' 'activity_Uilities' 'activity_Vehicle' 'activity_Vehicle Repairs'
'activity_Veterinary Sales' 'activity_Waste Management' 'activity_Water Distribution' 'activity_Weaving'
'activity_Wedding Expenses' 'activity_Well digging' 'activity_Wholesale' 'sector_Agriculture' 'sector_Arts' 'sector_Clothing'
'sector_Construction' 'sector_Education' 'sector_Entertainment' 'sector_Food' 'sector_Health' 'sector_Housing'
'sector_Manufacturing' 'sector_Personal Use' 'sector_Retail' 'sector_Services' 'sector_Transportation' 'sector_Wholesale'
'country_code_' 'country_code_AF' 'country_code_AL' 'country_code_AM' 'country_code_AZ' 'country_code_BF'
'country_code_BI' 'country_code_BJ' 'country_code_BO' 'country_code_BR' 'country_code_BT' 'country_code_BZ'
'country_code_CD' 'country_code_CG' 'country_code_CI' 'country_code_CL' 'country_code_CM' 'country_code_CN'
'country_code_CO' 'country_code_CR' 'country_code_DO' 'country_code_EC' 'country_code_EG' 'country_code_GE'
'country_code_GH' 'country_code_GT' 'country_code_GU' 'country_code_HN' 'country_code_HT' 'country_code_ID'
'country_code_IL' 'country_code_IN' 'country_code_IQ' 'country_code_JO' 'country_code_KE' 'country_code_KG'
'country_code_KH' 'country_code_LA' 'country_code_LB' 'country_code_LR' 'country_code_LS' 'country_code_MD'
'country_code_MG' 'country_code_ML' 'country_code_MM' 'country_code_MN' 'country_code_MR' 'country_code_MW'
'country_code_MX' 'country_code_MZ' 'country_code_NG' 'country_code_NI' 'country_code_NP' 'country_code_PA'
'country_code_PE' 'country_code_PH' 'country_code_PK' 'country_code_PR' 'country_code_PS' 'country_code_PY'
'country_code_RW' 'country_code_SB' 'country_code_SL' 'country_code_SN' 'country_code_SO' 'country_code_SR'
'country_code_SS' 'country_code_SV' 'country_code_TG' 'country_code_TH' 'country_code_TJ' 'country_code_TL'
'country_code_TR' 'country_code_TZ' 'country_code_UA' 'country_code_UG' 'country_code_US' 'country_code_VC'
'country_code_VI' 'country_code_VN' 'country_code_VU' 'country_code_WS' 'country_code_XK' 'country_code_YE'
'country_code_ZA' 'country_code_ZM' 'country_code_ZW' 'term_in_months' 'lender_count' 'borrower_genders'
'repayment_interval_bullet' 'repayment_interval_irregular' 'repayment_interval_monthly' 'repayment_interval_weekly'
'count_male' 'count_female'
```

In [18]: `# drop the original borrower_genders column`
`df1 = df1[, ! (names(df1) %in% c('borrower_genders'))]`

```
In [19]: head(df1,5)
```

A data.frame: 5 × 274

loan_amount	activity_Adult Care	activity_Agriculture	activity_Air Conditioning	activity_Animal Sales	activity_Aquaculture	activity_Arts	activity_Auto Repair	activity
<dbl>	<int>	<int>	<int>	<int>	<int>	<int>	<int>	
300	0	0	0	0	0	0	0	
575	0	0	0	0	0	0	0	
150	0	0	0	0	0	0	0	
200	0	0	0	0	0	0	0	
400	0	0	0	0	0	0	0	

```
In [20]: names(df1)
```

```
'loan_amount' 'activity_Adult Care' 'activity_Agriculture' 'activity_Air Conditioning' 'activity_Animal Sales' 'activity_Aquaculture'
'activity_Arts' 'activity_Auto Repair' 'activity_Bakery' 'activity_Balut-Making' 'activity_Barber Shop' 'activity_Beauty Salon'
'activity_Beekeeping' 'activity_Beverages' 'activity_Bicycle Repair' 'activity_Bicycle Sales' 'activity_Blacksmith'
'activity_Bookbinding' 'activity_Bookstore' 'activity_Bricks' 'activity_Butcher Shop' 'activity_Cafe' 'activity_Call Center'
'activity_Carpentry' 'activity_Catering' 'activity_Cattle' 'activity_Celebrations' 'activity_Cement' 'activity_Cereals'
'activity_Charcoal Sales' 'activity_Cheese Making' 'activity_Child Care' 'activity_Cleaning Services'
'activity_Cloth & Dressmaking Supplies' 'activity_Clothing' 'activity_Clothing Sales' 'activity_Cobbler' 'activity_Communications'
'activity_Computer' 'activity_Computers' 'activity_Construction' 'activity_Construction Supplies' 'activity_Consumer Goods'
'activity_Cosmetics Sales' 'activity_Crafts' 'activity_Dairy' 'activity_Decorations Sales' 'activity_Dental'
'activity_Education provider' 'activity_Electrical Goods' 'activity_Electrician' 'activity_Electronics Repair'
'activity_Electronics Sales' 'activity_Embroidery' 'activity_Energy' 'activity_Entertainment' 'activity_Event Planning'
'activity_Farm Supplies' 'activity_Farming' 'activity_Film' 'activity_Fish Selling' 'activity_Fishing' 'activity_Florist'
'activity_Flowers' 'activity_Food' 'activity_Food Market' 'activity_Food Production/Sales' 'activity_Food Stall'
'activity_Fruits & Vegetables' 'activity_Fuel/Firewood' 'activity_Funerals' 'activity_Furniture Making' 'activity_Games'
'activity_General Store' 'activity_Goods Distribution' 'activity_Grocery Store' 'activity_Hardware' 'activity_Health'
'activity_Higher education costs' 'activity_Home Appliances' 'activity_Home Energy' 'activity_Home Products Sales'
'activity_Hotel' 'activity_Internet Cafe' 'activity_Jewelry' 'activity_Knitting' 'activity_Land Rental'
'activity_Landscaping / Gardening' 'activity_Laundry' 'activity_Liquor Store / Off-License' 'activity_Livestock'
'activity_Machine Shop' 'activity_Machinery Rental' 'activity_Manufacturing' 'activity_Medical Clinic' 'activity_Metal Shop'
'activity_Milk Sales' 'activity_Mobile Phones' 'activity_Mobile Transactions' 'activity_Motorcycle Repair'
'activity_Motorcycle Transport' 'activity_Movie Tapes & DVDs' 'activity_Music Discs & Tapes' 'activity_Musical Instruments'
'activity_Musical Performance' 'activity_Natural Medicines' 'activity_Office Supplies' 'activity_Paper Sales'
'activity_Party Supplies' 'activity_Patchwork' 'activity_Perfumes' 'activity_Personal Care Products' 'activity_Personal Expenses'
'activity_Personal Housing Expenses' 'activity_Personal Medical Expenses' 'activity_Personal Products Sales'
'activity_Pharmacy' 'activity_Phone Accessories' 'activity_Phone Repair' 'activity_Phone Use Sales' 'activity_Photography'
'activity_Pigs' 'activity_Plastics Sales' 'activity_Poultry' 'activity_Primary/secondary school costs' 'activity_Printing'
'activity_Property' 'activity_Pub' 'activity_Quarrying' 'activity_Recycled Materials' 'activity_Recycling'
'activity_Religious Articles' 'activity_Renewable Energy Products' 'activity_Restaurant' 'activity_Retail' 'activity_Rickshaw'
'activity_Secretarial Services' 'activity_Services' 'activity_Sewing' 'activity_Shoe Sales' 'activity_Souvenir Sales'
'activity_Spare Parts' 'activity_Sporting Good Sales' 'activity_Tailoring' 'activity_Taxi' 'activity_Technology' 'activity_Textiles'
'activity_Timber Sales' 'activity_Tourism' 'activity_Transportation' 'activity_Traveling Sales' 'activity_Upholstery'
'activity_Used Clothing' 'activity_Used Shoes' 'activity_Utilities' 'activity_Vehicle' 'activity_Vehicle Repairs'
'activity_Veterinary Sales' 'activity_Waste Management' 'activity_Water Distribution' 'activity_Weaving'
'activity_Wedding Expenses' 'activity_Well digging' 'activity_Wholesale' 'sector_Agriculture' 'sector_Arts' 'sector_Clothing'
'sector_Construction' 'sector_Education' 'sector_Entertainment' 'sector_Food' 'sector_Health' 'sector_Housing'
'sector_Manufacturing' 'sector_Personal Use' 'sector_Retail' 'sector_Services' 'sector_Transportation' 'sector_Wholesale'
'country_code_' 'country_code_AF' 'country_code_AL' 'country_code_AM' 'country_code_AZ' 'country_code_BF'
'country_code_BI' 'country_code_BJ' 'country_code_BO' 'country_code_BR' 'country_code_BT' 'country_code_BZ'
'country_code_CD' 'country_code_CG' 'country_code_CI' 'country_code_CL' 'country_code_CM' 'country_code_CN'
'country_code_CO' 'country_code_CR' 'country_code_DO' 'country_code_EC' 'country_code_EG' 'country_code_GE'
'country_code_GH' 'country_code_GT' 'country_code_GU' 'country_code_HN' 'country_code_HT' 'country_code_ID'
'country_code_IL' 'country_code_IN' 'country_code_IQ' 'country_code_JO' 'country_code_KE' 'country_code_KG'
'country_code_KH' 'country_code_LA' 'country_code_LB' 'country_code_LR' 'country_code_LS' 'country_code_MD'
'country_code_MG' 'country_code_ML' 'country_code_MM' 'country_code_MN' 'country_code_MR' 'country_code_MW'
'country_code_MX' 'country_code_MZ' 'country_code_NG' 'country_code_NI' 'country_code_NP' 'country_code_PA'
'country_code_PE' 'country_code_PH' 'country_code_PK' 'country_code_PR' 'country_code_PS' 'country_code_PY'
'country_code_RW' 'country_code_SB' 'country_code_SL' 'country_code_SN' 'country_code_SO' 'country_code_SR'
'country_code_SS' 'country_code_SV' 'country_code_TG' 'country_code_TH' 'country_code_TJ' 'country_code_TL'
'country_code_TR' 'country_code_TZ' 'country_code_UA' 'country_code_UG' 'country_code_US' 'country_code_VC'
'country_code_VI' 'country_code_VN' 'country_code_VU' 'country_code_WS' 'country_code_XK' 'country_code_YE'
'country_code_ZA' 'country_code_ZM' 'country_code_ZW' 'term_in_months' 'lender_count' 'repayment_interval_bullet'
'repayment_interval_irregular' 'repayment_interval_monthly' 'repayment_interval_weekly' 'count_male' 'count_female'
```

```
In [37]: df2 = df1
```

```
In [38]: df2$loan_amount <- scale(df2$loan_amount)
df2$term_in_months <- scale(df2$term_in_months)
df2$lender_count <- scale(df2$lender_count)

# check that we get mean of 0 and sd of 1
colMeans(df2) # faster version of apply(scaled.dat, 2, mean)
apply(df2, 2, sd)
```

```
      loan_amount 2.22044604925031e-17
activity_Adult Care 0
activity_Agriculture 0
activity_Air Condition... 0
activity_Animal Sales 0
activity_Aquaculture 0
activity_Arts 0
activity_Auto Repair 0
activity_Bakery 0
activity_Balut-Making 0
activity_Barber Shop 0
activity_Beauty Salon 0
activity_Beekeeping 0
activity_Beverages 0
activity_Bicycle Repair 0
activity_Bicycle Sales 0
activity_Blacksmith 0
```

```
In [39]: head(df2,5)
```

A data.frame: 5 × 274

loan_amount	activity_Adult Care	activity_Agriculture	activity_Air Conditioning	activity_Animal Sales	activity_Aquaculture	activity_Arts	activity_Auto Repair	activity
<dbl[,1]>	<int>	<int>	<int>	<int>	<int>	<int>	<int>	
-0.1474420	0	0	0	0	0	0	0	
1.4744196	0	0	0	0	0	0	0	
-1.0320937	0	0	0	0	0	0	0	
-0.7372098	0	0	0	0	0	0	0	
0.4423259	0	0	0	0	0	0	0	

In [40]: names(df2)

```

'loan_amount' 'activity_Adult Care' 'activity_Agriculture' 'activity_Air Conditioning' 'activity_Animal Sales' 'activity_Aquaculture'
'activity_Arts' 'activity_Auto Repair' 'activity_Bakery' 'activity_Balut-Making' 'activity_Barber Shop' 'activity_Beauty Salon'
'activity_Beekeeping' 'activity_Beverages' 'activity_Bicycle Repair' 'activity_Bicycle Sales' 'activity_Blacksmith'
'activity_Bookbinding' 'activity_Bookstore' 'activity_Bricks' 'activity_Butcher Shop' 'activity_Cafe' 'activity_Call Center'
'activity_Carpentry' 'activity_Catering' 'activity_Cattle' 'activity_Celebrations' 'activity_Cement' 'activity_Cereals'
'activity_Charcoal Sales' 'activity_Cheese Making' 'activity_Child Care' 'activity_Cleaning Services'
'activity_Cloth & Dressmaking Supplies' 'activity_Clothing' 'activity_Clothing Sales' 'activity_Cobbler' 'activity_Communications'
'activity_Computer' 'activity_Computers' 'activity_Construction' 'activity_Construction Supplies' 'activity_Consumer Goods'
'activity_Cosmetics Sales' 'activity_Crafts' 'activity_Dairy' 'activity_Decorations Sales' 'activity_Dental'
'activity_Education provider' 'activity_Electrical Goods' 'activity_Electrician' 'activity_Electronics Repair'
'activity_Electronics Sales' 'activity_Embroidery' 'activity_Energy' 'activity_Entertainment' 'activity_Event Planning'
'activity_Farm Supplies' 'activity_Farming' 'activity_Film' 'activity_Fish Selling' 'activity_Fishing' 'activity_Florist'
'activity_Flowers' 'activity_Food' 'activity_Food Market' 'activity_Food Production/Sales' 'activity_Food Stall'
'activity_Fruits & Vegetables' 'activity_Fuel/Firewood' 'activity_Funerals' 'activity_Furniture Making' 'activity_Games'
'activity_General Store' 'activity_Goods Distribution' 'activity_Grocery Store' 'activity_Hardware' 'activity_Health'
'activity_Higher education costs' 'activity_Home Appliances' 'activity_Home Energy' 'activity_Home Products Sales'
'activity_Hotel' 'activity_Internet Cafe' 'activity_Jewelry' 'activity_Knitting' 'activity_Land Rental'
'activity_Landscaping / Gardening' 'activity_Laundry' 'activity_Liquor Store / Off-License' 'activity_Livestock'
'activity_Machine Shop' 'activity_Machinery Rental' 'activity_Manufacturing' 'activity_Medical Clinic' 'activity_Metal Shop'
'activity_Milk Sales' 'activity_Mobile Phones' 'activity_Mobile Transactions' 'activity_Motorcycle Repair'
'activity_Motorcycle Transport' 'activity_Movie Tapes & DVDs' 'activity_Music Discs & Tapes' 'activity_Musical Instruments'
'activity_Musical Performance' 'activity_Natural Medicines' 'activity_Office Supplies' 'activity_Paper Sales'
'activity_Party Supplies' 'activity_Patchwork' 'activity_Perfumes' 'activity_Personal Care Products' 'activity_Personal Expenses'
'activity_Personal Housing Expenses' 'activity_Personal Medical Expenses' 'activity_Personal Products Sales'
'activity_Pharmacy' 'activity_Phone Accessories' 'activity_Phone Repair' 'activity_Phone Use Sales' 'activity_Photography'
'activity_Pigs' 'activity_Plastics Sales' 'activity_Poultry' 'activity_Primary/secondary school costs' 'activity_Printing'
'activity_Property' 'activity_Pub' 'activity_Quarrying' 'activity_Recycled Materials' 'activity_Recycling'
'activity_Religious Articles' 'activity_Renewable Energy Products' 'activity_Restaurant' 'activity_Retail' 'activity_Rickshaw'
'activity_Secretarial Services' 'activity_Services' 'activity_Sewing' 'activity_Shoe Sales' 'activity_Souvenir Sales'
'activity_Spare Parts' 'activity_Sporting Good Sales' 'activity_Tailoring' 'activity_Taxi' 'activity_Technology' 'activity_Textiles'
'activity_Timber Sales' 'activity_Tourism' 'activity_Transportation' 'activity_Traveling Sales' 'activity_Upholstery'
'activity_Used Clothing' 'activity_Used Shoes' 'activity_Utilities' 'activity_Vehicle' 'activity_Vehicle Repairs'
'activity_Veterinary Sales' 'activity_Waste Management' 'activity_Water Distribution' 'activity_Weaving'
'activity_Wedding Expenses' 'activity_Well digging' 'activity_Wholesale' 'sector_Agriculture' 'sector_Arts' 'sector_Clothing'
'sector_Construction' 'sector_Education' 'sector_Entertainment' 'sector_Food' 'sector_Health' 'sector_Housing'
'sector_Manufacturing' 'sector_Personal Use' 'sector_Retail' 'sector_Services' 'sector_Transportation' 'sector_Wholesale'
'country_code_' 'country_code_AF' 'country_code_AL' 'country_code_AM' 'country_code_AZ' 'country_code_BF'
'country_code_BI' 'country_code_BJ' 'country_code_BO' 'country_code_BR' 'country_code_BT' 'country_code_BZ'
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'country_code_ZA' 'country_code_ZM' 'country_code_ZW' 'term_in_months' 'lender_count' 'repayment_interval_bullet'
'repayment_interval_irregular' 'repayment_interval_monthly' 'repayment_interval_weekly' 'count_male' 'count_female'

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In []: