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NaN   \n",
            "1   ham                      Ok lar... Joking wif u oni...
NaN   \n",
            "2  spam  Free entry in 2 a wkly comp to win FA Cup fina...
NaN   \n",
            "3   ham  U dun say so early hor... U c already then say...
NaN   \n",
            "4   ham  Nah I don't think he goes to usf, he lives aro...
NaN   \n",
            "\n",
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        "print(classification)"
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...\n",
            "1                           Ok lar... Joking wif u
oni...\n",
            "2       Free entry in 2 a wkly comp to win FA Cup
fina...\n",
            "3       U dun say so early hor... U c already then
say...\n",
            "4       Nah I don't think he goes to usf, he lives
aro...\n",
            "                                  ...
\n",
            "5567    This is the 2nd time we have tried 2 contact
u...\n",
            "5568                Will Ì_ b going to esplanade fr
home?\n",
            "5569    Pity, * was in mood for that. So...any other
s...\n",
            "5570    The guy did some bitching but I acted like
i'd...\n",
            "5571                            Rofl. Its true to its
name\n",
            "Name: v2, Length: 5572, dtype: object\n",
            "0        ham\n",
            "1        ham\n",
            "2       spam\n",
            "3        ham\n",
            "4        ham\n",
            "        ... \n",
            "5567    spam\n",
            "5568     ham\n",
            "5569     ham\n",
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            "5571     ham\n",
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        "from sklearn.model_selection import train_test_split\n",
        "import nltk\n",
```

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          ]
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        "for i in x_train :\n",
        "  text_length.append(len(word_tokenize(i)))"
      ],
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```

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        "x_test_sequences = tok.texts_to_sequences(x_test.values)"
      ],
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        "x_train = pad_sequences(x_train_sequences,
maxlen=max_sequence_length)\n",
        "x_test = pad_sequences(x_test_sequences,
maxlen=max_sequence_length)"
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              "          0,    0,    0,    0,    0,    0,    0,
38,   30,    8,\n",
              "          5,  273, 1989,   81,  116,   26,   11, 1656,
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              "         18,  299,   30,  349, 1990],\n",
              "       [   0,    0,    0,    0,    0,    0,    0,    0,
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              "          9,    4,  203, 1025,  225]], dtype=int32)"
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          "metadata": {},
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        "from sklearn.preprocessing import LabelEncoder\n"
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        "le = LabelEncoder()\n",
        "y_train = le.fit_transform(y_train)\n",
        "y_test = le.fit_transform(y_test)\n",
        "print(y_train)"
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```

```
        "from keras.models import Model, load_model\n",
        "from keras.layers import LSTM, Activation, Dense, Dropout,
Input, Embedding\n",
        "from keras.optimizers import RMSprop"
      ],
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        "def create_model(vocab_len, max_seq_len):\n",
        "    inputs = Input(name='inputs', shape=[max_seq_len])   #None,
150\n",
        "    layer = Embedding(vocab_length + 1, 50,
input_length=max_seq_len)(inputs) #None, 150, 50\n",
        "    layer = LSTM(64)(layer)  #None, 64\n",
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