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Algorithm 4 Classify Genre of Document
        Document, Source url
Input
Initialize newsSource \leftarrow [...]
Initialize techSource \leftarrow [...]
/* Calculate the originality and non-article ratio of document */
refernce\_ratio \leftarrow originality\_check(document)
ioc ratio ← non article fmt check(document)
/* Judge the genre cascading */
if Source_url \in newsSource or reference_ratio \geq 30% then
     determine type news
if Source\_url \in techSource or ioc\_ratio >= 30\% then
     determine type technical_report
if multiple used_malware in document then
     determine type campaign_report
else
     determine type analysis_report
```

end if