



# Summarization of News Articles Using PEGASUS



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# Task: Abstractive Summarization

**Dataset:** cnn\_dailymail 3.0.0

- 300k unique news articles
- Data Splits:
  - Train: 287,113
  - Validation: 13,368 (Sampled to 3,000)
  - Test: 11,490
- Metric: Rouge

**Article** (Mean tokens: 781)

SAN FRANCISCO, California (CNN) -- A magnitude 4.2 earthquake shook the San Francisco area Friday at 4:42 a.m. PT (7:42 a.m. ET), the U.S. Geological Survey reported. The quake left about 2,000 customers without power, said David Eisenhower, a spokesman for Pacific Gas and Light. Under the USGS classification, a magnitude 4.2 earthquake is considered "light," which it says usually causes minimal damage. "We had quite a spike in calls, mostly calls of inquiry, none of any injury, none of any damage that was reported," said Capt. Al Casciato of the San Francisco police. "It was fairly mild." Watch police describe concerned calls immediately after the quake ». The quake was centered about two miles east-northeast of Oakland, at a depth of 3.6 miles, the USGS said. Oakland is just east of San Francisco, across San Francisco Bay. An Oakland police dispatcher told CNN the quake set off alarms at people's homes. The shaking lasted about 50 seconds, said CNN meteorologist Chad Myers. According to the USGS, magnitude 4.2 quakes are felt indoors and may break dishes and windows and overturn unstable objects. Pendulum clocks may stop. E-mail to a friend .

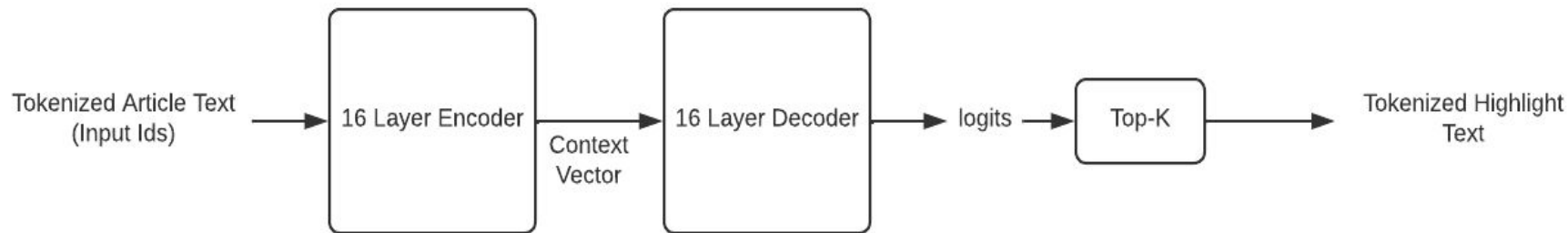
**Highlights** (Mean tokens: 56)

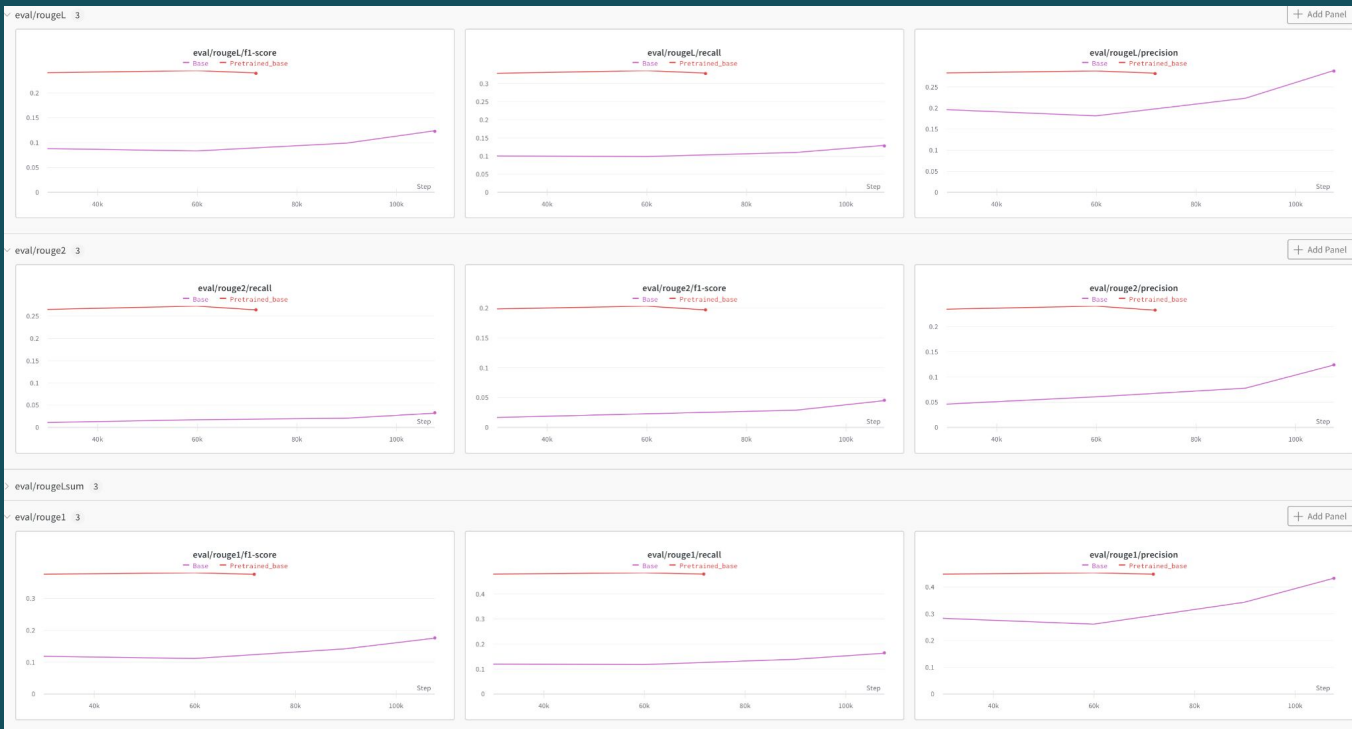
2,000 customers without electricity, power company says . Magnitude 4.2 quake set off home alarms, says Oakland police dispatcher . "It was fairly mild," police say, no immediate reports of injuries, damage . It was centered two miles east-northeast of Oakland, about 3.6 miles deep .

# Approach

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Model: PEGASUS-xsum





Learning Rate  
Batch Size  
Accumulation Steps  
Optimizer

5e-5  
8  
4  
Adam8

Model Name	GLM-XXLarge	BART + R-Drop	MUPPET BART Large	BART+R3F	ERNIE-GENLARGE	PALM	ProphetNet	PEGASUS LARGE	Fine tuned PEGASUS	Random Base
Rouge-1	44.7	44.51	44.45	44.38	44.31	44.30	44.20	44.17	36.7	18.52
Rouge-2	21.4	21.58	21.25	21.53	21.35	21.12	21.17	21.47	26.42	4.33
Rouge-L	41.4	41.24	41.4	41.17	41.60	41.41	41.30	41.11	23.91	12.57