

•Ù{Çˆºe±0 SPECTER: Document-level Representation Learning using Citation-informed Transformers0 cÐÚN†N yí°v„yŃ[fe±s.e±hc~§ˆhy:[fN`e!İÖSPECTERÿ ••Ç~ÓT ~„ˆ~Äv„Transformer(ı

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### \*\*1. x zv€İfoN Rˆg:\*\*

- \*\*•İ~\*\*ÿ s°g v„~„ˆ~ÄıİŞ j!Wˆÿ Y,BERTÿ N;%•””[ùˆÍb Sâ[P~ŞNûRıÿ •:NO[ùe±hc•ôQs€Tÿ Y,\_ u(Qs|ûÿ v„  
- \*\*vîh \*\*ÿ N:yŃ[fe±s.ˆ¾¼ıjN y!• u(v„e±hc]LQee!İÖÿ • u(NŽR |{0 cˆfP{IN n8NûRıÿ N eà— NûRıry[šv„\_@

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### \*\*2. e!İÖÿ SPECTERj!Wˆ\*\*

- \*\*h8\_Ä` `ó\*\*ÿ R)u(e±s.v„\*\* \_ u(Vp\*\*O\N:e±hcvøQs`v„vŃwcOáS÷ÿ ••ÇN QC~Äc\_Y1ÿ triplet lossÿ ~„ˆ~  
- \*\*•“Qe\*\*ÿ NÄ— e±s.v„\*\*h ~TÖEdX%••\*\*ÿ eà— Qhe±b \_ u(Oá`oÿ 0  
- \*\*ˆ~Ävîh \*\*ÿ O \_ u(Qs|ûv„e±s.[ùÿ kch7g,ÿ v„]LQefôc¥•Ńÿ —^ \_ u([ùÿ • h7g,ÿ fô•Üy»0  
- \*\*• h7g,{Vue\*\*ÿ ~ÓT →g:• h7g,TÖ“Vð~¾• h7g,”ÿ ^ˆkch7g,\_ u(OFg\*ˆ«gâˆae±s.\_ u(v„ˆºe±ÿ 0  
- \*\*j!Wˆgİg„\*\*ÿ WúNŽSciBERTR YËS ÿ ••Ç \_ u(Vp~„ˆ~Äu b e±hc]LQe0

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### \*\*3. •!s.N R e°\*\*

1. \*\*eà— \_@Ö v„• u(JLQe\*\*ÿ SPECTERu b v„]LQeSivôc¥u(NŽN n8NûRıÿ Y,R |{0 cˆfPÿ ÿ eà— ~•Y ˆ~  
2. \*\*e°ˆÄO0WúQÆSCIDOCS\*\*ÿ S T+7N\*e±hc~ŞNûRıÿ Y,R |{0 \_ u(„mK0 u(b7^LN:~„mK{lÿ ÿ cˆR”†W  
3. \*\*'€ýO R; \*\*ÿ W(SCIDOCSN f>„WO NŽWú~;j!Wˆÿ Y,SciBERT0 Citeomatic0 SGC{lÿ ÿ ^sWG`'€ýcE

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### \*\*4. [žšÖE~Ögœ\*\*

- \*\*NûRıˆhs°\*\*ÿ  
- \*\*R |{NûRı\*\*ÿ MeSH/MAGÿ ÿ F1cÐSG2.3/1.5p10  
- \*\* \_ u(„mK\*\*ÿ vôc¥ \_ u(TÖEqq \_ u(NûRıv„nDCGR R+•¾94.8TÖ94.90  
- \*\*u(b7^LN:~„mK\*\*ÿ QqmO%•Ö/Qq– ˆûÿ ÿ MAPcÐSG2.7/4.0p10  
- \*\*cˆfP|û~ß\*\*ÿ W(~;A/BmKˆÖp1Qûs±cÐSG46.5%0  
- \*\*Sı%•ÆS R g•\*\*ÿ SPECTERv„]LQezz•ô€ýfôY}cUfˆN;~vøQs`ÿ Y,]áz 0 ep[f0 ˆı{—g:yŃ[f€Z|{}`[Æÿ 0

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### \*\*5. \@~P`!\*\*

- \*\*•“Qe~PR6\*\*ÿ NÄO•u(h ~TÖEdX%••ÿ g\*R)u(Qhe±ÿ VæepcnSıfˆSÖ`TÖej!Wˆ•“Qe••^!~PR6ÿ 0  
- \*\*g\*gee1T \*\*ÿ cø}”fôY”„ˆ~Äj!Wˆÿ Y,XLNetÿ 0 Y NûRı|fN`0 QvNÖe±s.Qs€TOáS÷ÿ Y,QqO!€ ÿ 0

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### \*\*6. •Dn•SŃ^ \*\*

- \_ n•Năx 0 ~„ˆ~Äj!WˆSÊSCIDOCSWúQÆepcn~Æÿ T+u(b7p1Qûeâ\_x0 R |{h {~{lÿ ÿ OĂ•ÛT ~íx zv0

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### \*\*Qs•.~Ó,0\*\*

SPECTER••Ç\_ u(Oá`oXž\_:Transformerv,,e‡hc^hy:€ýR›ÿ W(yÑ[fe‡s.Y t NûR;N-[žs°N†šØeH0 • u(v,,`'€