Legal technologies and their (potential) impact on legal practice

Masha Medvedeva November 21, 2024

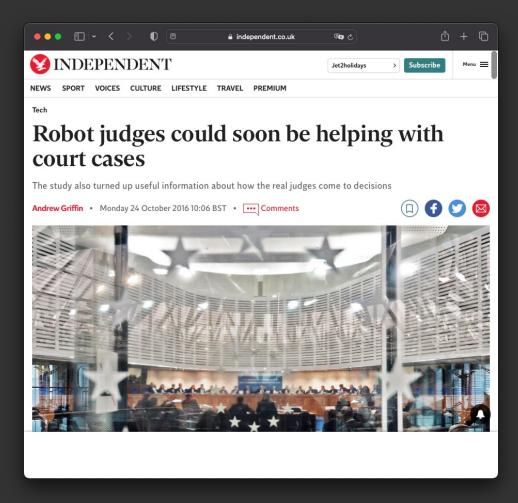


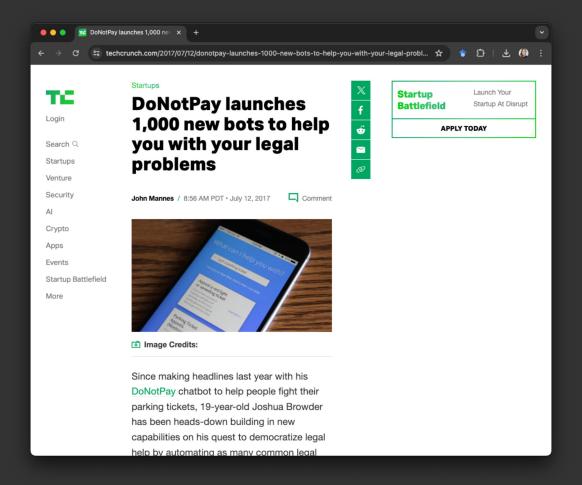


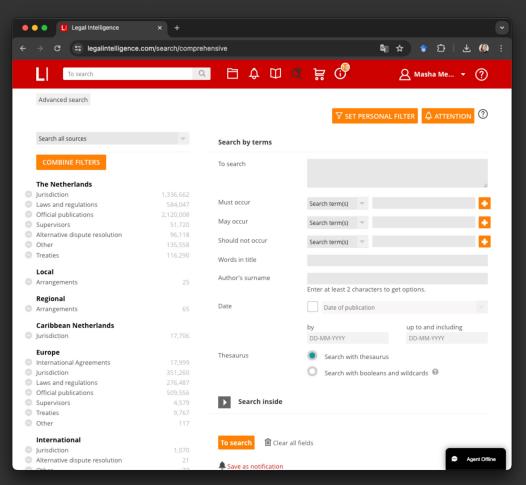
Dr. Masha Medvedeva

Business Studies &
eLaw - Center for Law and Digital Technologies,
Leiden University
m.medvedeva@law.leidenuniv.nl
linkedin.com/in/masha-medvedeva

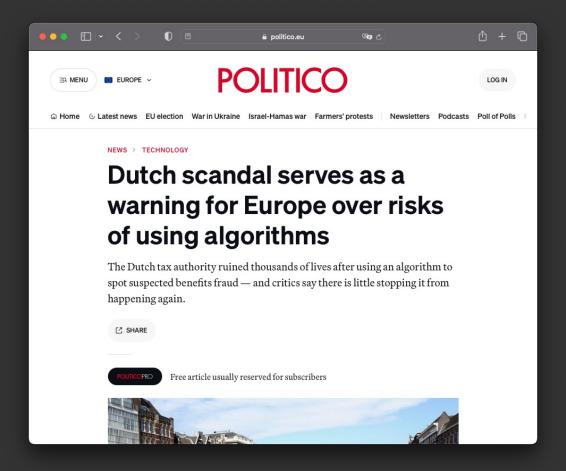


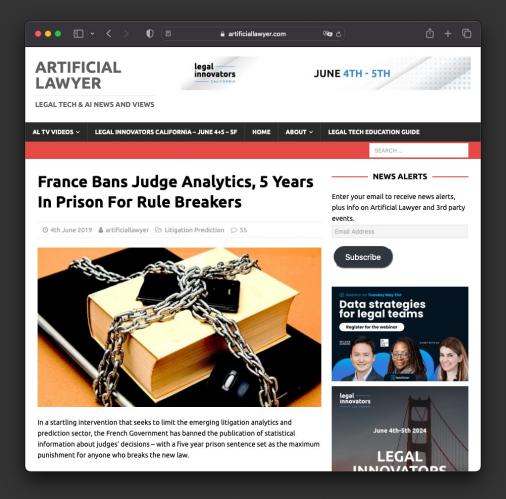


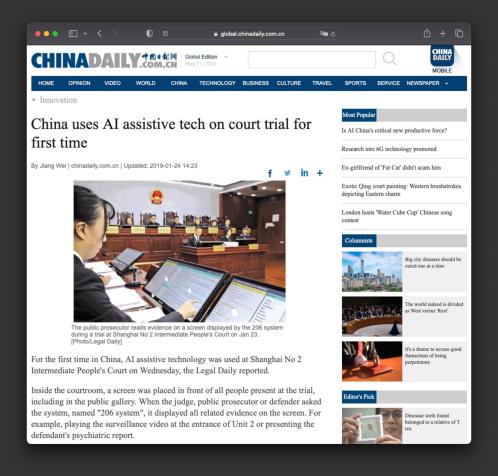


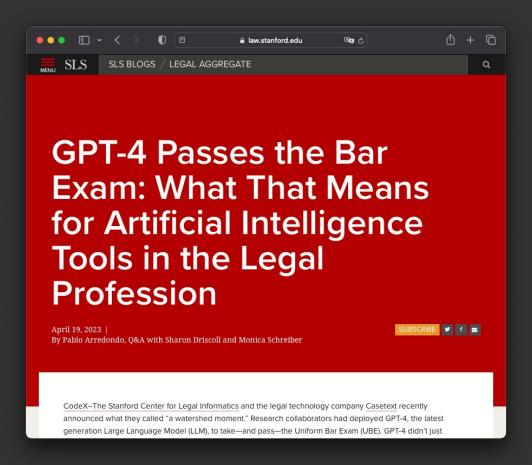


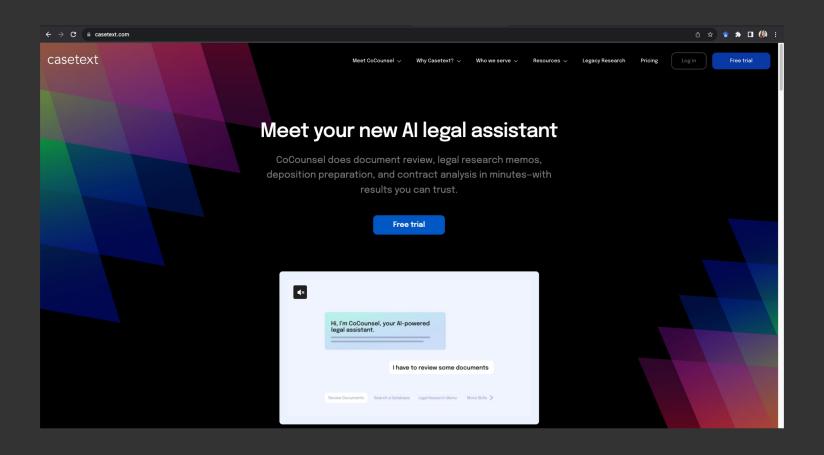
https://www.legalintelligence.com/search/comprehensive

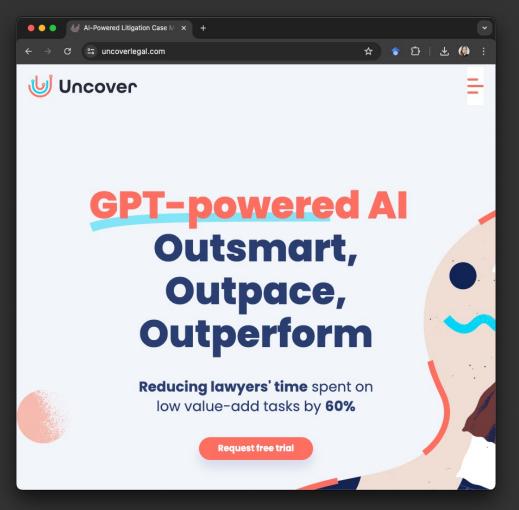






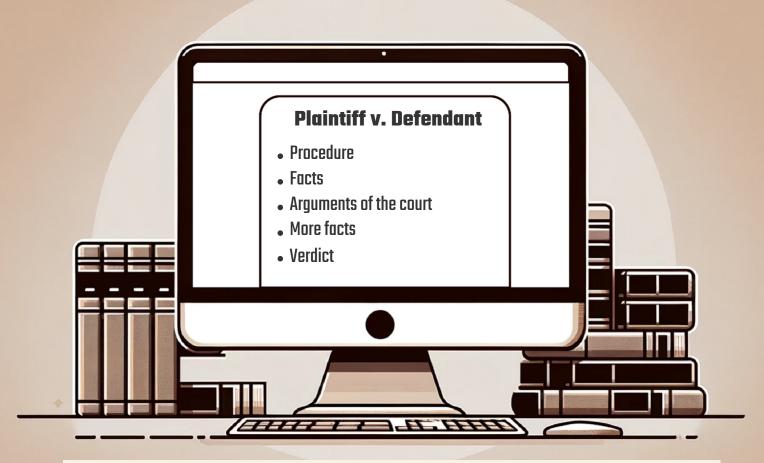






Sharma et al., 2015	Zhong et al., 2018	Kaufman et al., 2019	Condevoux et al., 2020	Sun et al., 2021	Ma et al., 2021	Hwang et al., 2022	Song et al., 2022	Feng et al., 2022	Rusnachenko et al., 2023	Liu et al., 2023	Prasad et al., 2023
Aletras et al., 2016	Zhong et al., 2018	Li et al., 2019	Shaikh et al., 2020	Alali et al., 2021	Mumcuoğlu et al., 2021	Niklaus et al., 2022	Yang et al., 2022	Zhao et al., 2022	Ningthoujam et al., 2023	Imran et al., 2023	Paul et al., 2023
Liu et al., 2017	Xiao et al., 2018	Li et al., 2019	Dang et al., 2020	Niklaus et al., 2021	Yue et al., 2021	Zhou et al., 2022	Henrik et al., 2022	Li et al., 2022	Almuslim et al., 2023	Mentzingen et al., 2023	Bhambhoria et al., 2021
Waltl et al., 2017	Chen et al., 2019	Chen et al., 2019	Xu et al., 2020	Tippett et al., 2021	Zhang et al., 2021	Chalkidis et al., 2022	Shang et al., 2022	Semo et al., 2022	Benedetto et al., 2023	Pal et al., 2023	Zhang et al., 2023
Şulea et al., 2017	O'Sullivan et al., 2019	Yang et al., 2019	Medvedeva et al., 2020	Limsopatham et al., 2021	Bagherian-Marandi et al., 2021	Jayasinghe et al., 2022	Gan et al., 2022	Bertalan et al., 2022	Jiang et al., 2023	Abbara et al., 2023	Zhang et al., 2023
Katz et al., 2017	Kaur et al., 2019	Collenette et al., 2020	Bertalan et al., 2020	Malik et al., 2021	Dong et al., 2021	Nuranti et al., 2022	Liu et al., 2022	Quemy et al., 2022	Niklaus et al., 2023	Zhao et al., 2023	Li et al., 2023
Şulea et al., 2017	Bao et al., 2019	Yang et al., 2020	Zhong et al., 2020	Medvedeva et al., 2021	Masala et al., 2021	Chen et al., 2022	Silva et al., 2022	Sert et al., 2022	Shao et al., 2021	Zahir et al., 2023	
Luo et al., 2017	Chalkidis et al., 2019	Strickson et al., 2020	Quemy et al., 2020	Clavié et al., 2021	Varga et al., 2021	Sari et al., 2022	Ahmad et al., 2022	Prasad et al., 2022	Tyss et al., 2023	Xiao et al., 2023	
Chen et al., 2017	Long et al., 2019	Salaün et al., 2020	Guo et al., 2020	Zhao et al., 2021	Liu et al., 2021	He et al., 2022	Almuslim et al., 2022	Lyu et al., 2022	Valvoda et al., 2023	He et al., 2023	
Kowsrihowat et al., 2018	Visentin et al., 2019	Duan et al., 2020	Wang et al., 2020	Kang et al., 2021	Salaün et al., 2021	Paul et al., 2022	Alghazzawi et al., 2022	Ma et al., 2022	Modi et al., 2023	Chen et al., 2023	
Virtucio et al., 2018	Wei et al., 2019	Medvedeva et al., 2020	Chen et al., 2020	Sivaranjani et al., 2021	Trautmann et al., 2022	Dan et al., 2022	Emarat et al., 2022	Bi et al., 2022	Hoang et al., 2023	Sukanya et al., 2023	
Li et al., 2018	Li et al., 2019	Chalkidis et al., 2020	Wang et al., 2020	Huang et al., 2021	Liu et al., 2022	Lage-Freitas et al., 2022	Li et al., 2022	Feng et al., 2023	Sharma et al., 2023	Guo et al., 2023	
Jiang et al., 2018	Yang et al., 2019	Xu et al., 2020	Le et al., 2020	Munoz Soro et al., 2021	McConnell et al., 2021	Song et al., 2022	de Menezes-Neto et al., 2022	Zhang et al., 2023	Tyss et al., 2023	Zhang et al., 2023	
Liu et al., 2018	Yuan et al., 2019	Ma et al., 2020	Zhu et al., 2020	Hsieh et al., 2021	Kalamkar et al., 2022	Zhao et al., 2022	Dal Pont et al., 2022	Steging et al., 2023	Lockard et al., 2023	Guo et al., 2023	
Hu et al., 2018	Pan et al., 2019	França et al., 2020	dos Santos et al., 2020	Gan et al., 2021	Galli et al., 2022	Chen et al., 2022	Wu et al., 2022	Nigam et al., 2023	Prasad et al., 2023	Zhao et al., 2023	

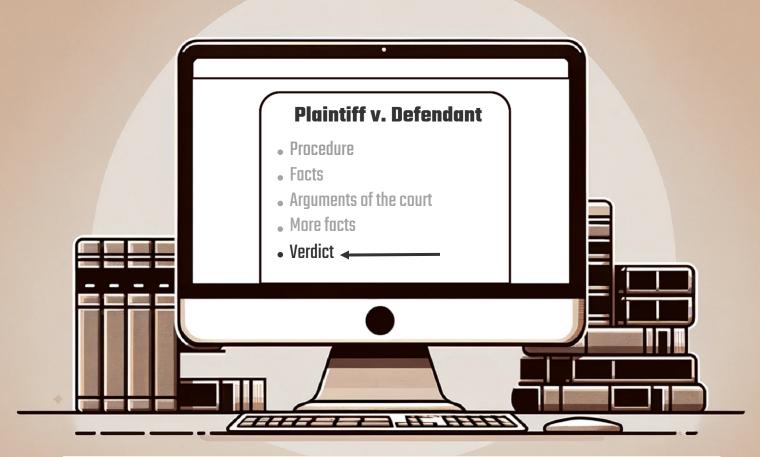
Sharma et al., 2015	Zhong et al., 2018	Kaufman et al., 2019	Condevoux et al., 2020	Sun et al., 2021	Ma et al., 2021	Hwang et al., 2022	Song et al., 2022	Feng et al., 2022	Rusnachenko et al., 2023	Liu et al., 2023	Prosad et al., 2023
84%										87%	
Aletras et al., 2016	Zhong et al., 2018	Li et al., 2019	Shaikh et al., 2020	Alali et al., 2021	Mumcuoğlu et al., 2021	Niklaus et al., 2022	Yang et al., 2022	Zhao et al., 2022	Ningthoujam et al., 2023	Imran et al., 2023	Paul et al., 2023
Liu et al., 2017	Xiao et al., 2018	Li et al., 2019	Dong et al., 2020	Niklaus et al., 2021	Yue et al., 2021	Zhou et al., 2022	Henrik et al., 2022	Li et al., 2022	Almuslim et al., 2023	Mentzingen et al., 2023	hambhoria et al., 2021
Waltl et al., 2017	Chen et al., 2019	Chen et al., 2019	Xu et al., 2020	Tippett et al., 2021	Zhang et al., 2021	Chalkidis et al., 2022	Shang et al., 2022	Semo et al., 2022	Benedetto et al., 207	Pal et al., 2023	Zhang et al., 2023
Şulea et al., 2017	O'Sullivan et al., 2019	Yang et al., 2019	Medvedeva et al., 2020	Limsopatham et al., 2021	Bagherian-Marandi et al., 2021	Jayasinghe et al., 2022	Gan et al., 2022	Bertalan et al., 2022	Jiang et al., 2023	Abbara et al., 2023	Zhang et al., 2023
Katz et al., 2017	Kaur et al., 2019	Collenette et al., 2020	Bertalan et al., 2020	Malik et al., 2021	Dong et al., 2021	Nuranti et al., 2022	Liu et al., 2022	Quemy et al., 2022	Niklaus et al., 2023	Zhao et al., 2023	Li et al., 2023
Şulea et al., 2017 99%	Bao et al., 2019	Yang et al., 2020	Zhong et al., 2020	Medvedeva et al., 2021	Masala et al., 2021	Chen et al., 2022	Silva et al., 2022	Sert et al., 2022	Shao et al., 2021	Zahir et al., 2023	
Luo et al., 2017	Chalkidis et al., 2019	Strickson et al., 2020	Quemy et al., 2020	Clavié et al., 2021	Varga et al., 2021	Sari et al., 2022	Ahmad et al., 2022	Prasad et al., 2022	Tyss et al., 2023	Xiao et al., 2023	
Chen et al., 2017	Long et al., 2019	Salaün et al., 2020	Guo et al., 2020	Zhao et al., 2021	Liu et al., 2021	He et al., 2022	Almuslim et al., 2022	Lyu et al., 2022	Valvoda et al., 2023	He et al., 2023	
Kowsrihowat et al., 2018	Visentin et al., 2019	Duan et al., 2020	Wang et al., 2020	Kang et al., 2021	Salaün et al., 2021	Paul et al., 2022	Alghazzawi et al., 2022	Ma et al., 2022	Modi et al., 2023	Chen et al., 2023	
Virtucio et al., 2018	Wei et al., 2019	Medvedeva et al., 2020	Chen et al., 2020	Sivaranjani et al., 2021	Trautmann et al., 2022	Dan et al., 2022	Emarat et al., 2022	Bi et al., 2022	Hoang et al., 2023	Sukanya et al., 2023	
Li et al., 2018	Li et al., 2019	Chalkidis et al., 2020	Wang et al., 2020	Huang et al., 2021	Liu et al., 2022	Lage-Freitas et al., 2022	Li et al., 2022	Feng et al., 2023	Sharma et al., 2023	Guo et al., 2023	
Jiang et al., 2018	Yang et al., 2019	Xu et al., 2020	Le et al., 2020	Munoz Soro et al., 2021	McConnell et al., 2021	Song et al., 2022	de Menezes-Neto et al., 2022	Zhang et al., 2023	Tyss et al., 2023	Zhang et al., 2023	
Liu et al., 2018	Yuan et al., 2019	Ma et al., 2020	Zhu et al., 2020	Hsieh et al., 2021	Kalamkar et al., 2022	Zhao et al., 2022	Dal Pont et al., 2022	Steging et al., 2023	Lockard et al., 2023	Guo et al., 2023	
Hu et al., 2018	Pan et al., 2019	França et al., 2020	dos Santos et al., 2020	Gan et al., 2021	Galli et al., 2022	Chen et al., 2022	Wu et al., 2022	Nigam et al., 2023	Prasad et al., 2023	Zhao et al., 2023	



MOST LJP PAPERS USE 'CASE FACTS' TO TRAIN AND TEST THE MODELS



MOST LJP PAPERS USE 'CASE FACTS' TO TRAIN AND TEST THE MODELS



THE FACTS ARE EXTRACTED FROM JUDGMENTS THAT HAVE A VERDICT



THE FACTS IN A COURT CASE ARE NOT INDISPUTABLE



THE 'CASE FACTS' ARE WRITTEN AFTER THE DECISION IS MADE



THE 'CASE FACTS' ARE NOT AVAILABLE TO THE LJP SYSTEM USER



Sharma et al., 2015	Zhong et al., 2018	Kaufman et al., 2019	Condevoux et al., 2020	Sun et al., 2021	Ma et al., 2021	Hwang et al., 2022	Song et al., 2022	Feng et al., 2022	Rusnachenko et al., 2023	Liu et al., 2023	Prasad et al., 2023
Aletras et al., 2016	Zhong et al., 2018	Li et al., 2019	Shaikh et al., 2020	Alali et al., 2021	Mumcuoğlu et al., 2021	Niklaus et al., 2022	Yang et al., 2022	Zhao et al., 2022	Ningthoujam et al., 2023	Imran et al., 2023	Paul et al., 2023
Liu et al., 2017	Xiao et al., 2018	Li et al., 2019	Dang et al., 2020	Niklaus et al., 2021	Yue et al., 2021	Zhou et al., 2022	Henrik et al., 2022	Li et al., 2022	Almuslim et al., 2023	Mentzingen et al., 2023	Bhambhoria et al., 2021
Waltl et al., 2017	Chen et al., 2019	Chen et al., 2019	Xu et al., 2020	Tippett et al., 2021	Zhang et al., 2021	Chalkidis et al., 2022	Shang et al., 2022	Semo et al., 2022	Benedetto et al., 2023	Pal et al., 2023	Zhang et al., 2023
Şulea et al., 2017	O'Sullivan et al., 2019	Yang et al., 2019	Medvedeva et al., 2020	Limsopatham et al., 2021	Bagherian-Marandi et al., 2021	Jayasinghe et al., 2022	Gan et al., 2022	Bertalan et al., 2022	Jiang et al., 2023	Abbara et al., 2023	Zhang et al., 2023
Katz et al., 2017	Kaur et al., 2019	Collenette et al., 2020	Bertalan et al., 2020	Malik et al., 2021	Dong et al., 2021	Nuranti et al., 2022	Liu et al., 2022	Quemy et al., 2022	Niklaus et al., 2023	Zhao et al., 2023	Li et al., 2023
Şulea et al., 2017	Bao et al., 2019	Yang et al., 2020	Zhong et al., 2020	Medvedeva et al., 2021	Masala et al., 2021	Chen et al., 2022	Silva et al., 2022	Sert et al., 2022	Shao et al., 2021	Zahir et al., 2023	
Luo et al., 2017	Chalkidis et al., 2019	Strickson et al., 2020	Quemy et al., 2020	Clavié et al., 2021	Varga et al., 2021	Sari et al., 2022	Ahmad et al., 2022	Prasad et al., 2022	Tyss et al., 2023	Xiao et al., 2023	
Chen et al., 2017	Long et al., 2019	Salaün et al., 2020	Guo et al., 2020	Zhao et al., 2021	Liu et al., 2021	He et al., 2022	Almuslim et al., 2022	Lyu et al., 2022	Valvoda et al., 2023	He et al., 2023	
Kowsrihowat et al., 2018	Visentin et al., 2019	Duan et al., 2020	Wang et al., 2020	Kang et al., 2021	Salaün et al., 2021	Paul et al., 2022	Alghazzawi et al., 2022	Ma et al., 2022	Modi et al., 2023	Chen et al., 2023	
Virtucio et al., 2018	Wei et al., 2019	Medvedeva et al., 2020	Chen et al., 2020	Sivaranjani et al., 2021	Trautmann et al., 2022	Dan et al., 2022	Emarat et al., 2022	Bi et al., 2022	Hoang et al., 2023	Sukanya et al., 2023	
Li et al., 2018	Li et al., 2019	Chalkidis et al., 2020	Wang et al., 2020	Huang et al., 2021	Liu et al., 2022	Lage-Freitas et al., 2022	Li et al., 2022	Feng et al., 2023	Sharma et al., 2023	Guo et al., 2023	
Jiang et al., 2018	Yang et al., 2019	Xu et al., 2020	Le et al., 2020	Munoz Soro et al., 2021	McConnell et al., 2021	Song et al., 2022	de Menezes-Neto et al., 2022	Zhang et al., 2023	Tyss et al., 2023	Zhang et al., 2023	
Liu et al., 2018	Yuan et al., 2019	Ma et al., 2020	Zhu et al., 2020	Hsieh et al., 2021	Kalamkar et al., 2022	Zhao et al., 2022	Dal Pont et al., 2022	Steging et al., 2023	Lockard et al., 2023	Guo et al., 2023	
Hu et al., 2018	Pan et al., 2019	França et al., 2020	dos Santos et al., 2020	Gan et al., 2021	Galli et al., 2022	Chen et al., 2022	Wu et al., 2022	Nigam et al., 2023	Prasad et al., 2023	Zhao et al., 2023	

Sharma et al., 2015	Zhong et al., 2018	Kaufman et al., 2019	Condevaux et al., 2020	Sun et al., 2021	Ma et al., 2021	Hwang et al., 2022	Song et al., 2022	Feng et al., 2022	Rusnachenko et al., 2023	Liu et al., 2023	Prasad et al., 2023
Aletras et al., 2016	Zhong et al., 2018	Li et al., 2019	Shaikh et al., 2020	Alali et al., 2021	Mumcuoğlu et al., 2021	Niklaus et al., 2022	Yang et al., 2022	Zhao et al., 2022	Ningthoujam et al., 2023	Imran et al., 2023	Paul et al., 2023
Liu et al., 2017	Xiao et al., 2018	Li et al., 2019	Dang et al., 2020	Niklaus et al., 2021	Yue et al., 2021	Zhou et al., 2022	Henrik et al., 2022	Li et al., 2022	Almuslim et al., 2023	Mentzingen et al., 2023	Bhambharia et al., 2023
Waltl et al., 2017	Chen et al., 2019	Chen et al., 2019	Xu et al., 2020	Tippett et al., 2021	Zhang et al., 2021	Chalkidis et al., 2022	Shang et al., 2022	Semo et al., 2022	Benedetto et al., 2023	Pal et al., 2023	Zhang et al., 2023
Şulea et al., 2017	O'Sullivan et al., 2019	Yang et al., 2019	Medvedeva et al., 2020	Limsopatham et al., 2021	Bagherian-Marandi et al., 2021	Jayasinghe et al., 2022	Gan et al., 2022	Bertalan et al., 2022	Jiang et al., 2023	Abbara et al., 2023	Zhang et al., 2023
Katz et al., 2017	Kaur et al., 2019	Collenette et al., 2020	Bertalan et al., 2020	Malik et al., 2021	Dong et al., 2021	Nuranti et al., 2022	Liu et al., 2022	Quemy et al., 2022	Niklaus et al., 2023	Zhao et al., 2023	Li et al., 2023
Şulea et al., 2017	Bao et al., 2019	Yang et al., 2020	Zhong et al., 2020	Medvedeva et al., 2021	Masala et al., 2021	Chen et al., 2022	Silva et al., 2022	Sert et al., 2022	Shao et al., 2021	Zahir et al., 2023	
Luo et al., 2017	Chalkidis et al., 2019	Strickson et al., 2020	Quemy et al., 2020	Clavié et al., 2021	Varga et al., 2021	Sari et al., 2022	Ahmad et al., 2022	Prasad et al., 2022	Tyss et al., 2023	Xiao et al., 2023	
Chen et al., 2017	Long et al., 2019	Salaün et al., 2020	Guo et al., 2020	Zhao et al., 2021	Liu et al., 2021	He et al., 2022	Almuslim et al., 2022	Lyu et al., 2022	Valvoda et al., 2023	He et al., 2023	
Kowsrihowat et al., 2018	Visentin et al., 2019	Duan et al., 2020	Wang et al., 2020	Kang et al., 2021	Salaün et al., 2021	Paul et al., 2022	Alghazzawi et al., 2022	Ma et al., 2022	Modi et al., 2023	Chen et al., 2023	
Virtucio et al., 2018	Wei et al., 2019	Medvedeva et al., 2020	Chen et al., 2020	Sivaranjani et al., 2021	Trautmann et al., 2022	Dan et al., 2022	Emarat et al., 2022	Bi et al., 2022	Hoang et al., 2023	Sukanya et al., 2023	
Li et al., 2018	Li et al., 2019	Chalkidis et al., 2020	Wang et al., 2020	Huang et al., 2021	Liu et al., 2022	Lage-Freitas et al., 2022	Li et al., 2022	Feng et al., 2023	Sharma et al., 2023	Guo et al., 2023	
Jiang et al., 2018	Yang et al., 2019	Xu et al., 2020	Le et al., 2020	Munoz Soro et al., 2021	McConnell et al., 2021	Song et al., 2022	de Menezes-Neto et al., 2022	Zhang et al., 2023	Tyss et al., 2023	Zhang et al., 2023	
Liu et al., 2018	Yuan et al., 2019	Ma et al., 2020	Zhu et al., 2020	Hsieh et al., 2021	Kalamkar et al., 2022	Zhao et al., 2022	Dal Pont et al., 2022	Steging et al., 2023	Lockard et al., 2023	Guo et al., 2023	
Hu et al., 2018	Pan et al., 2019	França et al., 2020	dos Santos et al., 2020	Gan et al., 2021	Galli et al., 2022	Chen et al., 2022	Wu et al., 2022	Nigam et al., 2023	Prasad et al., 2023	Zhao et al., 2023	

STATEMENT OF FACTS

The applicant, Ms Jelena Krstić, is a Serbian national, who was born in 1948 and lives in Belgrade. She is represented before the Court by Mr R. Subašić, a lawyer practising in the same city.

A. The circumstances of the case

The facts of the case, as submitted by the applicant, may be summarised as follows.

On 25 April 2007 the Municipal Court (*Opštinski sud*) in Niš found the applicant guilty of malfeasance (*zloupotreba službenog položaja*) and forging official documents (*falsifikovanje službene isprave*) and sentenced her to eleven months in prison, suspended for a period of three years (*uslovna osuda*).

On 14 June 2007, within fifteen days as of the date of receipt of this judgment, the applicant personally filed a timely appeal with the District Court (*Okružni sud*) in Niš. This appeal referred to the legal grounds set out in Article 367 of the Code of Criminal Procedure (*Zakonik o krivičnom postupku*, see at B.3 below), but did not offer any reasoning. The applicant, however, noted that detailed reasoning would be provided subsequently.

On 11 July 2007 a memorial containing such reasoning was submitted to the District Court. It was signed by the applicant's newly retained counsel and stated that it should be deemed as the substantiation of the earlier appeal lodged by the applicant personally. The submission referred to the legal grounds relied on by the applicant in her appeal, but was particularly focused on factual and evidentiary issues.

final judgment

THE FACTS

- 1. The applicant, Ms Jelena Krstić, is a Serbian national, who was born in 1948 and lives in Belgrade. She was represented before the Court by Mr R. Subašić, a lawyer practising in the same city.
- 2. The Serbian Government ("the Government") were represented by their Agent, Mr S. Carić.

- 3. The facts of the case, as submitted by the parties, may be summarised as follows.
- 4. On 25 April 2007 the Municipal Court (*Opštinski sud*) in Niš found the applicant guilty of malfeasance (*zloupotreba službenog položaja*) and forging official documents (*falsifikovanje službene isprave*) and sentenced her to eleven months in prison, suspended for a period of three years (*uslovna osuda*).
- 5. On 14 June 2007, within fifteen days as of the date of receipt of this judgment, the applicant personally filed an appeal on time with the District Court (*Okružni sud*) in Niš. This appeal referred to the legal grounds set out in Article 367 of the Code of Criminal Procedure (*Zakonik o krivičnom postupku*, see paragraph 21 below), but did not offer any reasoning. The applicant, however, noted that detailed reasoning would be provided subsequently since she had been ill and could not retain a lawyer earlier.
- 6. On 11 July 2007 a memorial containing such reasoning was submitted to the District Court. It was signed by the applicant's newly retained counsel and referred to the legal grounds relied on by the applicant in her appeal, but was particularly focused on factual issues.

STATEMENT OF FACTS

The applicant, Ms Jelena Krstić, is a Serbian national, who was born in 1948 and lives in Belgrade. She is represented before the Court by Mr R. Subašić, a lawyer practising in the same city.

A. The circumstances of the case

The facts of the case, as submitted by the applicant, may be summarised as follows.

On 25 April 2007 the Municipal Court (Opštinski sud) in Niš found the applicant guilty of malfeasance (zloupotreba službenog položaja) and forging official documents (falsifikovanje službene isprave) and sentenced her to eleven months in prison, suspended for a period of three years (uslovna osuda)

On 14 June 2007, within fifteen days as of the date of receipt of this judgment, the applicant personally filed a timely appeal with the District Court (*Okružni sud*) in Niš. This appeal referred to the legal grounds set out in Article 367 of the Code of Criminal Procedure (*Zakonik o krivičnom postupku*, see at B.3 below), but did not offer any reasoning. The applicant, however, noted that detailed reasoning would be provided subsequently.

On 11 July 2007 a memorial containing such reasoning was submitted to the District Court. It was signed by the applicant's newly retained counsel and stated that it should be deemed as the substantiation of the earlier appeal lodged by the applicant personally. The submission referred to the legal grounds relied on by the applicant in her appeal, but was particularly focused on factual and evidentiary issues.

final judgment

THE FACTS

- 1. The applicant, Ms Jelena Krstić, is a Serbian national, who was born in 1948 and lives in Belgrade. She was represented before the Court by Mr R. Subašić, a lawyer practising in the same city.
- 2. The Serbian Government ("the Government") were represented by their Agent, Mr S. Carić.

- 3. The facts of the case, as submitted by the parties, may be summarised as follows.
- 4. On 25 April 2007 the Municipal Court (*Opštinski sud*) in Niš found the applicant guilty of malfeasance (*zloupotreba službenog položaja*) and forging official documents (*falsifikovanje službene isprave*) and sentenced her to eleven months in prison, suspended for a period of three years (*uslovna osuda*).
- 5. On 14 June 2007, within fifteen days as of the date of receipt of this judgment, the applicant personally filed an appeal on time with the District Court (*Okružni sud*) in Niš. This appeal referred to the legal grounds set out in Article 367 of the Code of Criminal Procedure (*Zakonik o krivičnom postupku*, see paragraph 21 below), but did not offer any reasoning. The applicant, however, noted that detailed reasoning would be provided subsequently since she had been ill and could not retain a lawyer earlier.
- 6. On 11 July 2007 a memorial containing such reasoning was submitted to the District Court. It was signed by the applicant's newly retained counsel and referred to the legal grounds relied on by the applicant in her appeal, but was particularly focused on factual issues.

STATEMENT OF FACTS

The applicant, Ms Jelena Krstić, is a Serbian national, who was born in 1948 and lives in Belgrade. She is represented before the Court by Mr R. Subašić, a lawyer practising in the same city.

A. The circumstances of the case

The facts of the case, as submitted by the applicant, may be summarised as follows.

On 25 April 2007 the Municipal Court (Opštinski sud) in Niš found the applicant guilty of malfeasance (zloupotreba službenog položaja) and forging official documents (falsifikovanje službene isprave) and sentenced her to eleven months in prison, suspended for a period of three years (uslovna osuda)

On 14 June 2007, within fifteen days as of the date of receipt of this judgment, the applicant personally filed a timely appeal with the District Court (*Okružni sud*) in Niš. This appeal referred to the legal grounds set out in Article 367 of the Code of Criminal Procedure (*Zakonik o krivičnom postupku*, see at B.3 below), but did not offer any reasoning. The applicant, however, noted that detailed reasoning would be provided subsequently.

On 11 July 2007 a memorial containing such reasoning was submitted to the District Court. It was signed by the applicant's newly retained counsel and stated that it should be deemed as the substantiation of the earlier appeal lodged by the applicant personally. The submission referred to the legal grounds relied on by the applicant in her appeal, but was particularly focused on factual and evidentiary issues.

final judgment

THE FACTS

- 1. The applicant, Ms Jelena Krstić, is a Serbian national, who was born in 1948 and lives in Belgrade. She was represented before the Court by Mr R. Subašić, a lawyer practising in the same city.
- 2. The Serbian Government ("the Government") were represented by their Agent, Mr S. Carić.

- 3. The facts of the case, as submitted by the parties, may be summarised as follows.
- 4. On 25 April 2007 the Municipal Court (*Opštinski sud*) in Niš found the applicant guilty of malfeasance (*zloupotreba službenog položaja*) and forging official documents (*falsifikovanje službene isprave*) and sentenced her to eleven months in prison, suspended for a period of three years (*uslovna osuda*).
- 5. On 14 June 2007, within fifteen days as of the date of receipt of this judgment, the applicant personally filed an appeal on time with the District Court (*Okružni sud*) in Niš. This appeal referred to the legal grounds set out in Article 367 of the Code of Criminal Procedure (*Zakonik o krivičnom postupku*, see paragraph 21 below), but did not offer any reasoning. The applicant, however, noted that detailed reasoning would be provided subsequently since she had been ill and could not retain a lawyer earlier.
- 6. On 11 July 2007 a memorial containing such reasoning was submitted to the District Court. It was signed by the applicant's newly retained counsel and referred to the legal grounds relied on by the applicant in her appeal, but was particularly focused on factual issues.

STATEMENT OF FACTS

The applicant, Ms Jelena Krstić, is a Serbian national, who was born in 1948 and lives in Belgrade. She is represented before the Court by Mr R. Subašić, a lawyer practising in the same city.

A. The circumstances of the case

The facts of the case, as submitted by the applicant, may be summarised as follows.

On 25 April 2007 the Municipal Court (Opštinski sud) in Niš found the applicant guilty of malfeasance (zloupotreba službenog položaja) and forging official documents (falsifikovanje službene isprave) and sentenced her to eleven months in prison, suspended for a period of three years (uslovna osuda)

On 14 June 2007, within fifteen days as of the date of receipt of this judgment, the applicant personally filed a timely appeal with the District Court (*Okružni sud*) in Niš. This appeal referred to the legal grounds set out in Article 367 of the Code of Criminal Procedure (*Zakonik o krivičnom postupku*, see at B.3 below), but did not offer any reasoning. The applicant, however, noted that detailed reasoning would be provided subsequently.

On 11 July 2007 a memorial containing such reasoning was submitted to the District Court. It was signed by the applicant's newly retained counsel and stated that it should be deemed as the substantiation of the earlier appeal lodged by the applicant personality. The submission referred to the legal grounds relied on by the applicant in her appeal, but was particularly focused on factual and evidentiary issues.

final judgment

THE FACTS

- 1. The applicant, Ms Jelena Krstić, is a Serbian national, who was born in 1948 and lives in Belgrade. She was represented before the Court by Mr R. Subašić, a lawyer practising in the same city.
- 2. The Serbian Government ("the Government") were represented by their Agent, Mr S. Carić.

- 3. The facts of the case, as submitted by the parties, may be summarised as follows.
- 4. On 25 April 2007 the Municipal Court (*Opštinski sud*) in Niš found the applicant guilty of malfeasance (*zloupotreba službenog položaja*) and forging official documents (*falsifikovanje službene isprave*) and sentenced her to eleven months in prison, suspended for a period of three years (*uslovna osuda*).
- 5. On 14 June 2007, within fifteen days as of the date of receipt of this judgment, the applicant personally filed an appeal on time with the District Court (*Okružni sud*) in Niš. This appeal referred to the legal grounds set out in Article 367 of the Code of Criminal Procedure (*Zakonik o krivičnom postupku*, see paragraph 21 below), but did not offer any reasoning. The applicant, however, noted that detailed reasoning would be provided subsequently since she had been ill and could not retain a lawyer earlier.
- 6. On 11 July 2007 a memorial containing such reasoning was submitted to the District Court. It was signed by the applicant's newly retained counsel and referred to the legal grounds relied on by the applicant in her appeal, but was particularly focused on factual issues.

Training on 2000-2018 testing on 2019

2019 - Communicated cases										
		P R F1 #								
SVM	no viol.	0.62	0.53	0.57	229					
	violation	0.69	0.77	0.73	311					
	macro avg.	0.66	0.65	0.65	540					
	accuracy			0.67	540					
H-BERT	no viol.	0.57	0.67	0.61	229					
	violation	0.72	0.63	0.67	311					
	macro avg.	0.64	0.65	0.64	540					
	accuracy			0.65	540					
LEGAL-	no viol.	0.55	0.50	0.52	229					
BERT	violation	0.66	0.70	0.68	311					
	macro avg.	0.60	0.60	0.60	540					
	accuracy			0.61	540					

2019 - Final judgements										
		Р	R	F1	#					
SVM	no viol.	0.69	0.95	0.80	229					
	violation	0.95	0.68	0.79	311					
	macro avg.	0.82	0.81	0.79	540					
	accuracy			0.79	540					
H-BERT	no viol.	0.90	0.92	0.91	229					
	violation	0.94	0.93	0.93	311					
	macro avg.	0.92	0.92	0.92	540					
	accuracy			0.92	540					
LEGAL-	no viol.	0.87	0.90	0.88	229					
BERT	violation	0.92	0.90	0.91	311					
	macro avg.	0.90	0.91	0.90	540					
	accuracy			0.90	540					

Sharma et al., 2015	Zhong et al., 2018	Kaufman et al., 2019	Condevoux et al., 2020	Sun et al., 2021	Ma et al., 2021	Hwang et al., 2022	Song et al., 2022	Feng et al., 2022	Rusnachenko et al., 2023	Liu et al., 2023	Prosad et al., 2023
84%										87%	
Aletras et al., 2016	Zhong et al., 2018	Li et al., 2019	Shaikh et al., 2020	Alali et al., 2021	Mumcuoğlu et al., 2021	Niklaus et al., 2022	Yang et al., 2022	Zhao et al., 2022	Ningthoujam et al., 2023	Imran et al., 2023	Paul et al., 2023
Liu et al., 2017	Xiao et al., 2018	Li et al., 2019	Dong et al., 2020	Niklaus et al., 2021	Yue et al., 2021	Zhou et al., 2022	Henrik et al., 2022	Li et al., 2022	Almuslim et al., 2023	Mentzingen et al., 2023	hambhoria et al., 2021
Waltl et al., 2017	Chen et al., 2019	Chen et al., 2019	Xu et al., 2020	Tippett et al., 2021	Zhang et al., 2021	Chalkidis et al., 2022	Shang et al., 2022	Semo et al., 2022	Benedetto et al., 207	Pal et al., 2023	Zhang et al., 2023
Şulea et al., 2017	O'Sullivan et al., 2019	Yang et al., 2019	Medvedeva et al., 2020	Limsopatham et al., 2021	Bagherian-Marandi et al., 2021	Jayasinghe et al., 2022	Gan et al., 2022	Bertalan et al., 2022	Jiang et al., 2023	Abbara et al., 2023	Zhang et al., 2023
Katz et al., 2017	Kaur et al., 2019	Collenette et al., 2020	Bertalan et al., 2020	Malik et al., 2021	Dong et al., 2021	Nuranti et al., 2022	Liu et al., 2022	Quemy et al., 2022	Niklaus et al., 2023	Zhao et al., 2023	Li et al., 2023
Şulea et al., 2017 99%	Bao et al., 2019	Yang et al., 2020	Zhong et al., 2020	Medvedeva et al., 2021	Masala et al., 2021	Chen et al., 2022	Silva et al., 2022	Sert et al., 2022	Shao et al., 2021	Zahir et al., 2023	
Luo et al., 2017	Chalkidis et al., 2019	Strickson et al., 2020	Quemy et al., 2020	Clavié et al., 2021	Varga et al., 2021	Sari et al., 2022	Ahmad et al., 2022	Prasad et al., 2022	Tyss et al., 2023	Xiao et al., 2023	
Chen et al., 2017	Long et al., 2019	Salaün et al., 2020	Guo et al., 2020	Zhao et al., 2021	Liu et al., 2021	He et al., 2022	Almuslim et al., 2022	Lyu et al., 2022	Valvoda et al., 2023	He et al., 2023	
Kowsrihowat et al., 2018	Visentin et al., 2019	Duan et al., 2020	Wang et al., 2020	Kang et al., 2021	Salaün et al., 2021	Paul et al., 2022	Alghazzawi et al., 2022	Ma et al., 2022	Modi et al., 2023	Chen et al., 2023	
Virtucio et al., 2018	Wei et al., 2019	Medvedeva et al., 2020	Chen et al., 2020	Sivaranjani et al., 2021	Trautmann et al., 2022	Dan et al., 2022	Emarat et al., 2022	Bi et al., 2022	Hoang et al., 2023	Sukanya et al., 2023	
Li et al., 2018	Li et al., 2019	Chalkidis et al., 2020	Wang et al., 2020	Huang et al., 2021	Liu et al., 2022	Lage-Freitas et al., 2022	Li et al., 2022	Feng et al., 2023	Sharma et al., 2023	Guo et al., 2023	
Jiang et al., 2018	Yang et al., 2019	Xu et al., 2020	Le et al., 2020	Munoz Soro et al., 2021	McConnell et al., 2021	Song et al., 2022	de Menezes-Neto et al., 2022	Zhang et al., 2023	Tyss et al., 2023	Zhang et al., 2023	
Liu et al., 2018	Yuan et al., 2019	Ma et al., 2020	Zhu et al., 2020	Hsieh et al., 2021	Kalamkar et al., 2022	Zhao et al., 2022	Dal Pont et al., 2022	Steging et al., 2023	Lockard et al., 2023	Guo et al., 2023	
Hu et al., 2018	Pan et al., 2019	França et al., 2020	dos Santos et al., 2020	Gan et al., 2021	Galli et al., 2022	Chen et al., 2022	Wu et al., 2022	Nigam et al., 2023	Prasad et al., 2023	Zhao et al., 2023	

70.		740							Rusnachenko et al.,		
Sharma et al., 2015	Zhong et al., 2018	Kaufman et al., 2019	Condevaux et al., 2020	Sun et al., 2021	Ma et al., 2021	Hwang et al., 2022	Song et al., 2022	Feng et al., 2022	2023	Liu et al., 2023	Prasad et al., 2023
Aletras et al., 2016	Zhong et al., 2018	Li et al., 2019	Shaikh et al., 2020	Alali et al., 2021	Mumcuoğlu et al., 2021	Niklaus et al., 2022	Yang et al., 2022	Zhao et al., 2022	Ningthoujam et al., 2023	Imran et al., 2023	Paul et al., 2023
Liu et al., 2017	Xiao et al., 2018	Li et al., 2019	Dang et al., 2020	Niklaus et al., 2021	Yue et al., 2021	Zhou et al., 2022	Henrik et al., 2022	Li et al., 2022	Almuslim et al., 2023	Mentzingen et al., 2023	Bhambhoria et al., 2023
Waltl et al., 2017 57%	Chen et al., 2019	Chen et al., 2019	Xu et al., 2020	Tippett et al., 2021	Acc Thang et al., 2021	Chalkidis et al., 2022	Shang et al., 2022	Semo et al., 2022	Benedetto et al., 2023	Pal et al., 2023	Zhang et al., 2023
Şulea et al., 2017	O'Sullivan et al., 2019	Yang et al., 2019	Medvedeva et al., 2020	Limsopatham et al., 2021	Bagherian-Marandi et al., 2021	Jayasinghe et al., 2022	Gan et al., 2022	Bertalan et al., 2022	Jiang et al., 2023	Abbara et al., 2023	Zhang et al., 2023
Katz et al., 2017	Kaur et al., 2019	Collenette et al., 2020	Bertalan et al., 2020	Malik et al., 2021	Dong et al., 2021	Nuranti et al., 2022	Liu et al., 2022	Quemy et al., 2022	Niklaus et al., 2023	Zhao et al., 2023	Li et al., 2023
Şulea et al., 2017	Bao et al., 2019	Yang et al., 2020	Zhong et al., 2020	Medvedeva et al., 2021	Masala et al., 2021	Chen et al., 2022	Silva et al., 2022	Sert et al., 2022	Shao et al., 2021	Zahir et al., 2023	
Luo et al., 2017	Chalkidis et al., 2019	Strickson et al., 2020	Quemy et al., 2020	Clavié et al., 2021	Varga et al., 2021	Sari et al., 2022	Ahmad et al., 2022	Prasad et al., 2022	Tyss et al., 2023	Xiao et al., 2023	
Chen et al., 2017	Long et al., 2019	Salaün et al., 2020	Guo et al., 2020	Zhao et al., 2021	Liu et al., 2021	He et al., 2022	Almuslim et al., 2022	Lyu et al., 2022	Valvoda et al., 2023	He et al., 2023	
Kowsrihowat et al., 2018	Visentin et al., 2019	Duan et al., 2020	Wang et al., 2020	Kang et al., 2021	Salaün et al., 2021	Paul et al., 2022	Alghazzowi et al., 2022	Ma et al., 2022	Modi et al., 2023	Chen et al., 2023	
Virtucio et al., 2018	Wei et al., 2019	Medvedeva et al., 2020	Chen et al., 2020	Sivaranjani et al., 2021	Trautmann et al., 2022	Dan et al., 2022	Emarat et al., 2022	Bi et al., 2022	Hoang et al., 2023	Sukanya et al., 2023	
Li et al., 2018	Li et al., 2019	Chalkidis et al., 2020	Wang et al., 2020	Huang et al., 2021	Liu et al., 2022	Lage-Freitas et al., 2022	Li et al., 2022	Feng et al., 2023	Sharma et al., 2023	Guo et al., 2023	
Jiang et al., 2018	Yang et al., 2019	Xu et al., 2020	Le et al., 2020	Munoz Soro et al., 2021	McConnell et al., 2021	Song et al., 2022	de Menezes-Neto et al.,	Zhang et al., 2023	Tyss et al., 2023	Zhang et al., 2023	
Liu et al., 2018	Yuan et al., 2019	Ma et al., 2020	Zhu et al., 2020	Hsieh et al., 2021	Kalamkar et al., 2022	Zhao et al., 2022	Dal Pont et al., 2022	Steging et al., 2023	Lockard et al., 2023	Guo et al., 2023	
Hu et al., 2018	Pan et al., 2019	França et al., 2020	dos Santos et al., 2020	Gan et al., 2021	Galli et al., 2022	Chen et al., 2022	Wu et al., 2022	Nigam et al., 2023	Prasad et al., 2023	Zhao et al., 2023	

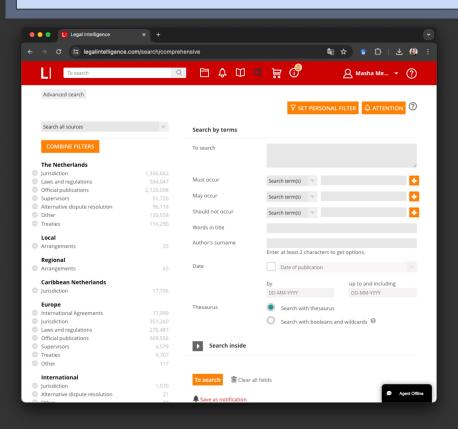
Why does this happen?

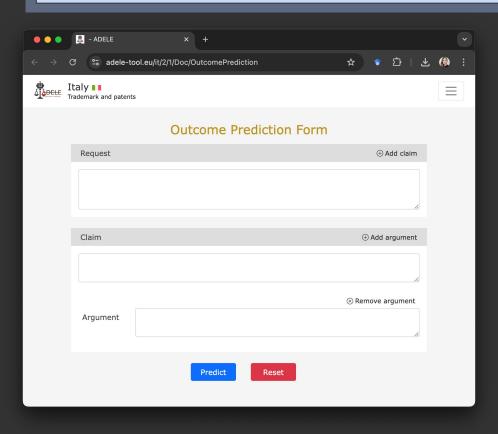
Systems are not built for any particular purpose, and do not have a specific end-user in mind

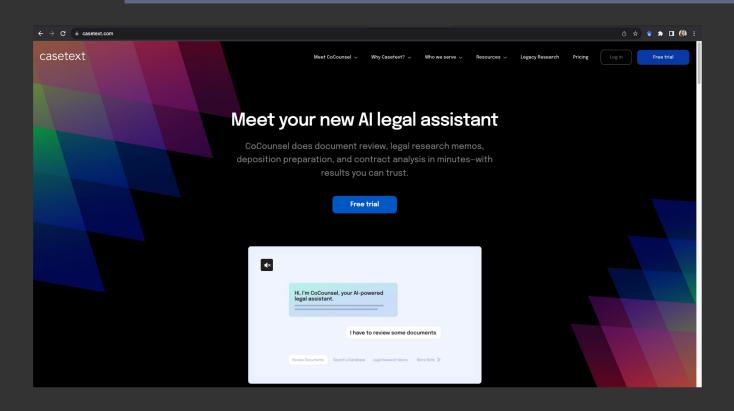
Who is building the models?

Computer scientists don't understand law

Lawyers don't understand machine learning

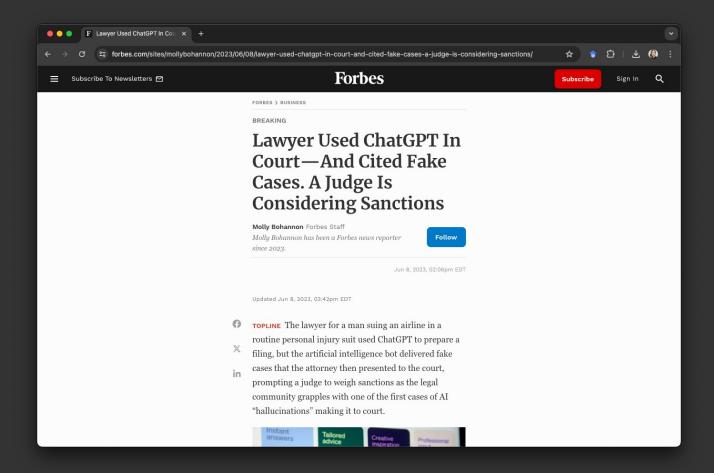


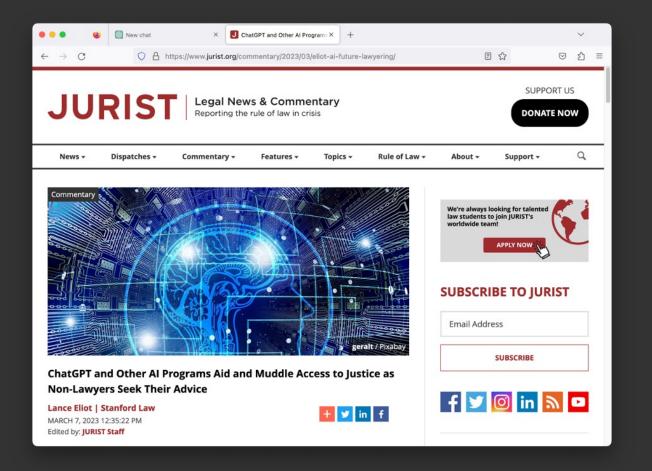




Other limitations

- Cost of error
- Biases
- Wrong data
- Bad evaluations
- Unreliable updates
- Erosion of public trust
- Over-reliance



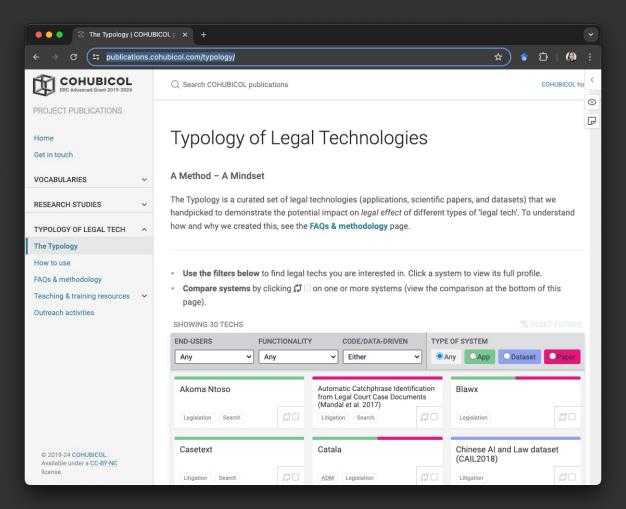


What could the future look like?

Al in lower-risk scenarios (e.g. search)

More automation with less machine learning

Investment in incremental steps instead of AGI



https://publications.cohubicol.com/typology/

Masha Medvedeva



m.medvedeva@law.leidenuniv.nl

linkedin.com/in/masha-medvedeva