Text Summarisation of Legal Case Orders COE - AI @ NIC

Case Study – Lower Judiciary – Case Orders

- Problem Statement Extract the Salient Features of a Case Order from its pdf automatically.
- Use can be used for legal case research to identify relevant information, recognize mistakes, and spot inconsistencies.
- AI Model Used Text Rank Algorithm for Machine Learning
- Automatic summarization helps to reduce large text documents to a short set of words/a short paragraph that conveys the meaning of the entire text.
- This algorithm makes use of *unsupervised learning*.

Text Summarization – What is it?

- There are two methods used in automatic Text summarization:
 - 1. The *extractive method* selects a subset of existing words, phrases or sentences in the original text to form summaries. These are selected *verbatim*.
 - 2. The *abstractive method* builds an internal semantic representation and uses natural language generation techniques to create summaries that resembles the ones created by humans. This summary *may have words that are not present in the original document*. This procedure is rather *complex*.
- Currently, extractive text summarization techniques are known to be most useful for text summarization and is being used here.

Text Pre-Processing

- For the text document input we:
 - Obtain the individual sentences i.e. tokenize the input document based on sentences.
 - Obtain the list of words present in each sentence (Term Sentence Matrix).
 - Filter out only the relevant terms which have been 'Part of Speech' (POS) tagged as "Noun", "Adjective", "Verb", etc.
 - Stemming (bringing into base form) of the words in each document.
 - We have now obtained the list of sentences and the words in each sentence.

Text Rank Algorithm

- Text rank algorithm is an adaptation of <u>Google's Page Rank</u> Algorithm, and is open source. It is a cutting-edge algorithm developed in Jan 2018, and is a latest realization in semantic text analysis.
- It is a <u>graph-based ranking algorithm</u>. In the case of <u>sentence extraction</u>, a graph is created where <u>each vertex represents a sentence</u> and <u>each edge is weighted</u> <u>and represents the similarity between 2 sentences</u>.
- Based on the number of edges and their weights for each vertex, a <u>"Text Rank</u> <u>Score"</u> is computed for each sentence.
- The sentences are then *ordered in descending order of this sentence score*. The top most sentences are then used to represent the summary of the given text.
- <u>We can obtain as long summaries as we want</u> e.g. 1 word/phrase, 1 sentence, 2 sentences, 100 words, etc. It only needs to process the document to be summarised and <u>is independent of the other documents present in the corpus</u>.

Sample 1 Page MACP Case Order pdf

(CNR NO.MHAURIM74292015)

COMMON ORDER BELOW EXH.1 AND 43 IN MACP NO.5/2016 (Date : 04.05.2018)

In view of joint pursis (Exh.45) dtd.13.04.2018 of both parties this matter is kept in summer vacation for passing the final order. Today both parties and their ld. Advocates are present before this Court. They have settled the matter before the ld. Judge Mediator. The report (Exh.44) to that effect is received enclosed with the compromise agreement (Exh.43) from the ld. Judge Mediator on 13.04.2018.

 Both parties admit contents of compromise agreement (Exh.43) voluntarily. Hence, today the agreement (Exh.43) is accepted.

 The application is allowed in terms of the compromise agreement (Exh.43) and the compromise Award be prepared accordingly.

4. The petitioner shall pay additional Court fees if any required.

Date : 04.05.2018.

(N.T.Ghadge) Member, Motor Accident Claims Tribunal, <u>Aurangabad</u>.

CERTIFICATE

I affirm that the contents of this P.D.F. file are same, word to word as per the original Order.

CERTIFICATE

I affirm that the contents of this P.D.F. file are same, word to

word, as per the original Order.

Name of the Stenographer	: Prachi Prashant Kulkarni
Court	: (N.T.Ghadge) Member, M.A.C.T, Aurangabad.
Date of Order	: 04.05.2018

...2_ Order signed by the presiding officer on : 04.05.2018 Order uploaded on : 09.05.2018

Text Rank Summariser

Text-Rank Summarizer

Upload the documents you want to summarize

File input

Browse... 20120000052016_1.pdf

Enter the number of sentences needed in the summary

Numeric input

5

Results

[1] Case 1 [201200000052016_1.pdf] results ------

- 1. Today both parties and their ld. Advocates are present before this Court.
- 2. The report (Exh.44) to that effect is received enclosed with the compromise agreement (Exh.43) from the ld.
- 3. 2. Both parties admit contents of compromise agreement (Exh.43) voluntarily.
- 4. The application is allowed in terms of the compromise agreement (Exh.43) and the compromise Award be prepared accordingly.
- 5. Date of Order : 04.05.2018 .. 2 ..



Sample 12 Page MACP Case Order 2

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 Received on
 : 22.08.2016

 Registered on
 : 29.09.2016

 Decided on
 : 03.07.2017

 Duration
 : Y. M. D.

 00 09 04

BEFORE MEMBER, MOTOR ACCIDENT CLAIMS TRIBUNAL AT AURANGABAD

(Presided over by : N.T.Ghadge)

M.A.C.P. No.544/2016

Exh.No.45/A.

- Smr.Vaishali Wd/o Narayan Jivrag, Age: 25 years, Occ: Household, R/o: Nimkheda, Tq.Phulambri, Dist.Aurangabad.
- Kum.Vaisnavi D/o Narayan Jivrag, Age : 06 years, Occ: Education.
- Vaibhav S/o Narayan Jivrag, Age : 03 years, Occ: Nil,

The claimants No.2 & 3 are minors, u/g of their real mother claimant No.1.

 Smt.Rukhmanbai Wd/o Dada Jivrag, Age : 60ears, Occ: Household, R/o : As above.
 PETITIONERS

VERSUS

- Nisar Khan S/o Hamid Khand, Age : Major, Occ: Driver, R/o : Pokharanwala Mohalla, Sadabad, Teh Sadabad, Dist. Hatras (U.P.).
- Abu Vakhar S/o Mohd. Mustak, Age : Major, Occ : Business R/o : 47, Runkata, Madina Colony, Dholpur, Kiravali, Agra (U.P.).

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MACP No.544/2016

(Judgment)

Throug	tional Insurance Co.Ltd. h its Divisional Manager, nal Office at Hazari Chamb	vers,	
Station	Road, Aurangabad.		RESPONDENTS
CLAIM:	Under Section 166 of Mot	or Vehicles	Act, 1988.
Appearan	015		

For petitioners : Adv.S.S.Kere, For respondent nos.1 & 2 : Adv.V.C.Sarode, For respondent no.3 : Adv.S.M.Qazi,

JUDGMENT

(Delivered on 03.07.2017)

The widow, two minor children and widowed mother of deceased Motorcycle rider named Narayan Dada Jivrag, have filed this claim petition for compensation Rs.25,00,000/-, in view of section 166 of the Motor Vehicles Act, 1988.

The brief facts of the petition are as follows;

On 30.5.2016, at about 02:00 p.m., deceased Narayan Dada Jiwrag was riding Motorcycle no.MH-20 BZ-3327 from Jiwrag to Borgaon Arj road. When his Motorcycle had reached near Zilla Parishad School of village Pendgaon, the Truck No.RJ-11 GA-4965 came from its opposite side, driven by respondent no.1 in high speed and in negligent manner. Said Truck torn the Cable wire passing towards said school, then he drove his Truck from wrong side with said Cable wire and then dashed to the Motorcycle of the MACP No.544/2016 (Judgment)

deceased. In said incident, the deceased had sustained serious injuries on his neck, head and all over his body. He was declared dead in GMC Hospital, Aurangabad. The Crime was registered in Vadod Bazzar Police Station against respondent no.1. Respondent no.2 is an owner and respondent no.3 is the insurance company of the Truck in question. The deceased was having monthly income of Rs.15 to 20 thousand from milk business. He was having two Jersey cows and one buffalo. He was the driver earning additional net monthly income more than Rs.20,000/- by driving his own Tractor No.MH-20 AS-1820 with Trolley no.MCA-4461. He was 30 years old able bodied man and therefore, just compensation of Rs.25,000/- with interest @ 18% p.a. jointly and severally prayed from all respondents.

3. Respondent no.1 and 2 vide their written statement Exh.15 strongly opposed the claim denying all averments in the petition. They admitted that the Truck in question is owned by respondent no.2, insured with respondent no.3 and driven by respondent no.1. However, denying the happening of the accident in question due to rash and negligent driving of respondent no.1, denied their liability to pay any compensation as prayed.

4. Respondent no.3 vide his written statement Exh.19 has strongly opposed the claim denying all averments. Denying that the accident in question took place because of rash and negligent driving of respondent no.1, it is contended that the death of deceased resulted as his neck was entangled

Sample MACP Case Order 2 Contd..

- 5-

MACP No 544/2016 (Judement)

with a service wire and he fell on the road with said wire around his neck due to high speed of his Motorcycle. It is contended that respondent no.1 was not holding driving licence. Disputing the age, so also the sources and monthly income of the deceased, it is prayed that the petition be dismissed with costs.

5. On the basis of rival contentions of the parties, my learned predecessor framed issues at Exh.20. The issues and findings thereto are as

follows:

SR.NO. POINTS FINDINGS 1) Whether claimants prove that deceased Naravan Dada Jivrag was dashed by respondent no.1 by driving Truck bearing No.RJ-11 GA-4965 rashly and negligently? Yes. Whether claimants are entitled for 2) Yes, compensation? If yes, what is just Rs.39,25,000/and reasonable compensation? 3) From whom claimants are entitled to recover compensation and

From respondent nos.2 and 3 along with interest @ 7% p.a.

4) What order?

interest if any?

The petition is allowed.

REASONS

6 Petitioner Vaishali (PW2) widow of the deceased Motorcycle rider has examined herself on behalf of all petitioners. In addition to that evidence of Rajendra Vyavhare (PW1) who had witnessed the accident in question is tendered.

MACP No.544/2006 (Judgment)

7. In support of oral evidence the documentary evidence (Exh.23 to 36) which include the copy of FIR, the spot panchnama, inquest panchnama and postmortem notes of the deceased, photo copy of insurance policy and driving licence of respondent no.1 and report in Form COMP-AA of the Truck involved in the accident are produced. The driving licence of the deceased, the R.C.Book of the Tractor No.MH-20 AS-1830 and Trolley no.MCA-4461 standing in his name, 7/12 extract of land gat no.157, situated at village Nimkheda, the loan repayment documents of the Tractor, the passbook of Aurangabad DCB Bank and Siddheshwar Urban Co-operative Bank, Br.Sillod, the copy of charge-sheet of S.C.C.No.355/2016 along with the statements of the witnesses, photo copy of driving licence of respondent no.1, photocopy of all India Permit, authorization certificate of the truck in question are also produced. None of the respondents have not tendered any evidence.

8. Heard learned Adv.S.S.Kere, for the petitioners and for the respondents. Adv. Kere has placed reliance on the following case laws, 1) "Dulcing Fernandes and Others V/s Joaquim Xavier Cruz and

Another, 2013 (4) T.A.C. 827 (S.C.)".

2) "Ashabai Kalyan Kothi and Others V/s Baban santosh Bidgar and Others, 2016 (3) T.A.C. 494 (Bom.)".

3) "Usha Arjun Kavade (Smt.) V/s Tahil Chand Shaikh and Others,

MACP No.544/2016 (Judgment)

2011 (2) T.A.C. 584 (Bom.)".

4) "Surinder Kumar Sehgal & Ors. V/s New India Assurance Co.Ltd. &

Ors., 2011(4) T.A.C. 532 (Del.)".

- 5) "United India Insurance Co.Ltd. V/s Deepak Goel and Others, 2014(2) T.A.C. 846 (DeLV).
- 6) "Bimla Devi and others V/s Himachal Road Transport Corporation and others, 2009 ac 756 (SC)".
- 7) "Divisional Office, United India Insurance Co.Ltd. V/s Smt.Pramila Raman Ghatule and Others, 2016 (3) T.A.C. 378 (Bom.)".
- 8) "Minu Rout and Another V/s Satva Pradvumna Mohapatra and Others, 2013(4) T.A.C. 840 (S.C.)".
- 9) "Smt.Neeta W/o Kallappa Kadolkar and Others etc. V/s The Divisional Manager, MSRTC, Kolhapur, 2015(1) T.A.C. 340 (S.C.)". 10)"Maharashtra Minimum Wages Notification 01.7.2015 to 31.12.2015".
- 11)"Rajesh and others V/s Rajbir and others, (2013) 9 Supreme Court Cases 54".

12)"Sarla Varma and others V/s Delhi Transport Corporation and another, 2009(5) Mh.I.J., 775".

Learned Advocate for respondent no.3-insurance company has submitted written notes of argument (Exh.42). He has relied on the decision

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Sample MACP Case Order 2 Contd..

.. 8 ...

MACP No.544/2016 (Judgment)

dated 28.02.2017 in "Civil Appeal No(S) 3409 of 2017, Chikkamma and

Anr. V/s Parvathamma and Anr" of the Hon'ble Supreme Court.

ISSUE NO.1 :

10. None of the respondents have tendered any evidence in rebuttal. This is the first circumstance favourable to the petitioners. Smt.Vaishali (PW1) is the widow of the deceased. Admittedly, she has not witnessed the accident of her husband. But, she has stated the date, time and the place of the accident of Motorcycle of her husband, so also of the Truck involved in question. In cross-examination she has not given any admission to learned Adv. for insurance company either on the point of cause of accident in question or the age and income of her deceased husband. Her entire evidence on the point of documentary proof has been gone unchallenged on behalf of insurance company. It was nowhere suggested to her that said documents are false or fabricated. Therefore, her oral evidence and the documentary proof in support of it have great weightage.

11. On the point of negligence of respondent no.1 in happening of the accident in question, oral evidence of Mr.Rajendra (PW1) is very important. His testimony indicates that he himself had witnessed the accident of both vehicles in question. On his report the Crime was registered against respondent no.1. The copy of his FIR clearly speaks that before the accident he was travelling as a pillion rider on the deceased Motorcycle rider and after

MACP No.544/2016

(Judement)

he got down near the temple, when the deceased Motorcycle proceeded further to go to village Nimkheda, the truck in question came from its opposite side cutting the over head Cable wires. It also further speaks that due to that the said over head Cable wires were cut came down and then driver of the truck while driving it from wrong side, hit to the Motorcycle of the deceased. And at the same time the said over head Cable wires also hit to his neck, due to which, he fell on the road having injuries over his neck and head. It also speaks that he himself had followed the respondent no. I who was running away from the spot of accident, but he ran away leaving the truck in question.

12. Considering the above mentioned contents about the situation and the circumstances in which the accident of both vehicles took place, mentioned in the FIR, I find great similarity in the oral testimony of Mr. Rajendra (PW1)- informant. He has not given any admission to disbelieve his testimony regarding the cause of the accident in question. Respondent no.1 who was also eye witness of the accident and driver of truck in question had chosen not to lead any evidence. It leads this Court to hold that at the time of accident as his truck was in high speed, the over head Cable wires were cut by his truck while in motion. It also leads this Court to hold that his act of driving his truck from wrong side, giving dash to the deceased Motorcycle rider, because of which, he fall on the road, are his clear negligent acts. MACP No.544/2016 (Judgment)

13. On considering the cause of death certificate and Postmortem notes read with inquest panchnama of the deceased, I come to the conclusion that the death of deceased Motorcycle rider Mr.Narayan was resulted due to rash and negligent driving of respondent Bhagwan. Hence, I hold that issue no.1 is proved and answer it in the affirmative.

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ISSUE NOS.2 TO 4 :

14. As per the pleadings in the petition and oral evidence of Smt.Vaishali (PW1), deceased Narayan was having three different sources of monthly income. First was milk business, second one was from agricultural and third one from driving his own Tractor with Trolley on charges for ploughing etc.. The R.C.Book for Tractor no.MH-20 AS-1830 and the Trolley MCA- 4461 (Exh.31 to 33) clearly show that said vehicles were in the name of deceased. His driving licence (Exh.30) shows that he was skilled driver of non-transport vehicles. The papers of HDFC Bank and the Pass-Books referred in above para produced on record indicate that he had purchased said vehicles raising loan and he was doing agricultural work on charges. His Pass-Books indicate that he was earning in an average Rs.10,000/- per month from said Tractor and Trolley.

15. The 7/12 extract (Exh.34) indicates that the deceased was holding agricultural land admeasuring 1 Hector 15 Ares in gut no.157, in which, there was/is one Well. It is significant to note that there is no

Sample MACP Case Order 2 Contd..

... 10 ...

MACP No.544/2016

(Judgmm0)

documentary proof regarding milk business of the deceased except the testimony of his wife Vaishali.

16. There being no evidence in rebuttal on behalf of any of the respondents on the point of sources and quantum of monthly income of the deceased, it can be safely said that he was being having driving skill to drive non-transport vehicle including the Tractor owned by him, he was having monthly income of Rs.8,000/- and Rs.4,000/- by the hiring the Tractor and Trolley for agricultural work per month. I also deem it fit and proper to hold that he was having at least Rs.1,000/- per month income from his agricultural land. In short, I hold that the deceased was having Rs.15,000/- monthly income from aforesaid sources on the day of his accident in question.

17. This Court has read all case laws relied by both parties. Their ratios are helpful to consider the computation of just compensation.

18. In the driving licence (Exh.30) of the deceased his date of birth is shown as 09.6.1982. Therefore, on the day of accident he was 33 years 11 months old married person. Considering his age and the monthly income as held in above para, I proceed to make computation of just compensation. Considering all these facts and circumstances, I hold that only respondent no.2- owner and respondent no.3- insurance company of the Truck in question are jointly and severally liable to pay the just compensation to the petitioners,

MACP No 544/2016 (Judgment)

as computed below. Hence, I answer issue nos.2 and 3 accordingly.

- II.-

Computation of the compensation

1	Mostly Notional income of the decement	Rs.15,000-	
1	Plas 50% future prospect.	81.1.500	
3	Minus 1/4 towards personal expenses.	No.3750-	Rs.18759-
4	Annual Income	No.16,759-s-12	Rs125,000-
1	Mutiplicand as per the Judgment of Horbie Supreme Court in Sarta Verma Case as the decaused was approximately 35 years still at the time of accident.	16	
5	Lass of dependency	Rs2,25,000-a 16	R. X.00,000-
6	Losi of estate		Rx 51,000
T.	Consortium to petitioner No.1 wills		Rx 1,00,000-
E.	Lave and affection Ro 50,000- to petitioner no. 2 to 4 each as per decision in Norta Vs. Deviannal Manager, MSRCC, 2015 ACJ 508.		Rs1,50,880-
8	Paneral expenses		Rx25,000-
10.	Total compensation (Total of the Col. nov. 5 to 9)		Ra.39,25,009-
11.	ban e		075 pa on the amount in col Nu.36.

In view of above mentioned computation, I proceed to pass the

following order :-

ORDER

1. The petition is allowed with costs against respondent nos.2 and 3 and dismissed with costs

against respondent no.1.

2. Respondent No.2 and 3 shall jointly and severally

pay to petitioners Rs.39,25,000/- with interest @ 7% p.a. from the date of the application till entire compensation is paid, within two months from the date of this order.

MACP No 544/2016 (Judgment)

3. Out of awarded compensation 50% amount with

proportionate interest shall be paid to petitioner No.1-widow and 20% with proportionate interest shall be paid to minor petitioner Nos.2 and 3 each and 10% with proportionate interest to petitioner no.4 mother, by separate demand drafts issued in their names.

5. The amount of compensation with proportionate

interest awarded to minor petitioner Nos.2 and 3 shall be kept in separate fixed deposits in their name under the guardianship of petitioner No.1mother, in Nationalized bank as per their choice Branch at Aurangabad, till they attain majority.

6. The petitioners shall pay additional court fees, if any required.

7. The Award be drawn accordingly.

Sd/-

(N.T.Ghadge) Member, Motor Accident Claims Tribunal, Aurangabad

Date : 03.07.2017.

Court

CERTIFICATE

I affirm that the contents of this P.D.F. file are same, word to

word, as per the original Order.

Name of the Stenographer	: Prachi Prashant Kulkarni
0	(NTChile)

: (N.T.Ghadge) Member, Motor accident Claim Tribunal, Aurangabad.

Date of Judgment	: 03.07.2017
Order signed by the pensiding officer on	: 07.07.2017
Order uploaded on	: 07.07.2017

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MACP Case Order 2 Extraction

201200005442016_1.pdf Upload complete Enter the number of sentences needed in the summary 25 Results [1] Case 1 [201200005442016_1.pdf] results ----->

1. For respondent no.3 : Adv.S.M.Qazi.

2. The widow, two minor children and widowed mother of deceased Motorcycle rider named Narayan Dada Jivrag, have filed this claim petition for compensation Rs.25,00,000/-, in view of section 166 of the Motor Vehicles Act, 1988.

3. Respondent no.2 is an owner and respondent no.3 is the insurance company of the Truck in question.

4. He was 30 years old able bodied man and therefore, just compensation of Rs.25,000/- with interest @ 18% p.a. jointly and severally prayed from all respondents.

5. They admitted that the Truck in question is owned by respondent no.2, insured with respondent no.3 and driven by respondent no.1.

6. However, denying the happening of the accident in question due to rash and negligent driving of respondent no.1, denied their liability to pay any compensation as prayed.

7. Denying that the accident in question took place because of rash and negligent driving of respondent no.1, it is contended that the death of deceased resulted as his neck was entangled .. 4 ..

8. It is contended that respondent no.1 was not holding driving licence.

9. 3) From whom claimants are entitled From respondent nos.2 to recover compensation and and 3 along with interest if any?

10. In addition to that evidence of Rajendra Vyavhare (PW1) who had witnessed the accident in question is tendered.

11. None of the respondents have not tendered any evidence.

12. 8. Heard learned Adv.S.S.Kere, for the petitioners and for the respondents.

MACP Case Order 2 Extraction Contd..

13. MACP No.544/2016 (Judgment) 2011 (2) T.A.C. 584 (Bom.).

14. But, she has stated the date, time and the place of the accident of Motorcycle of her husband, so also of the Truck involved in question.

15. 11. On the point of negligence of respondent no.1 in happening of the accident in question, oral evidence of Mr.Rajendra (PW1) is very important.

16. His testimony indicates that he himself had witnessed the accident of both vehicles in question.

17. It also speaks that he himself had followed the **respondent no.1 who was running away from the spot of accident, but he ran away** leaving the truck in question.

18. Respondent no.1 who was also eye witness of the accident and driver of truck in question had chosen not to lead any evidence.

19. 16. There being **no evidence in rebuttal on behalf of any of the respondents on the point of sources and quantum of monthly income of the deceased, it can be safely said that he was being having driving skill to drive non-transport vehicle including the Tractor owned by him, he was having monthly income of Rs.8,000/- and Rs.4,000/- by the hiring the Tractor and Trolley for agricultural work per month.**

20. In short, I hold that the deceased was having Rs.15,000/- monthly income from aforesaid sources on the day of his accident in question.

21. Considering all these facts and circumstances, I hold that only respondent no.2- owner and respondent no.3- insurance company of the Truck in question are jointly and severally liable to pay the just compensation to the petitioners, .. 11 .. MACP No.544/2016 (Judgment) as computed below.

22. Computation of the compensation 1 Monthly Notional income of the deceased Rs.15,000/- 2.

23. Multiplicand as per the Judgment of Hon'ble Supreme Court 16 in Sarla Verma Case as the deceased was approximately 33 years old at the time of accident.

24. The petition is allowed with costs against respondent nos.2 and 3 and dismissed with costs against respondent no.1.

25. Respondent No.2 and 3 shall jointly and severally pay to petitioners Rs.39,25,000/- with interest @ 7% p.a. from the date of the application till entire compensation is paid, within two months from the date of this order.

Projected Use

Text Rank Can be
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 Learning from
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 semi structured
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This Unsupervised Learning can be augmented with Labelled CaseOrders for Supervised Learning and can be used to hone the capabilities of the Text Summariser.

Further Deep Learning can be used if a lot of labelled cases are made available.

Thanks !

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