LaTeX Homework

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1 Section1

My favourite topics in Computer Science and Linguistics:

1. machine learning
2. genetic algorithms
3. programming
4. narrow AI projects
5. phonology
6. speech synthesizers
7. language resources

2 Section2
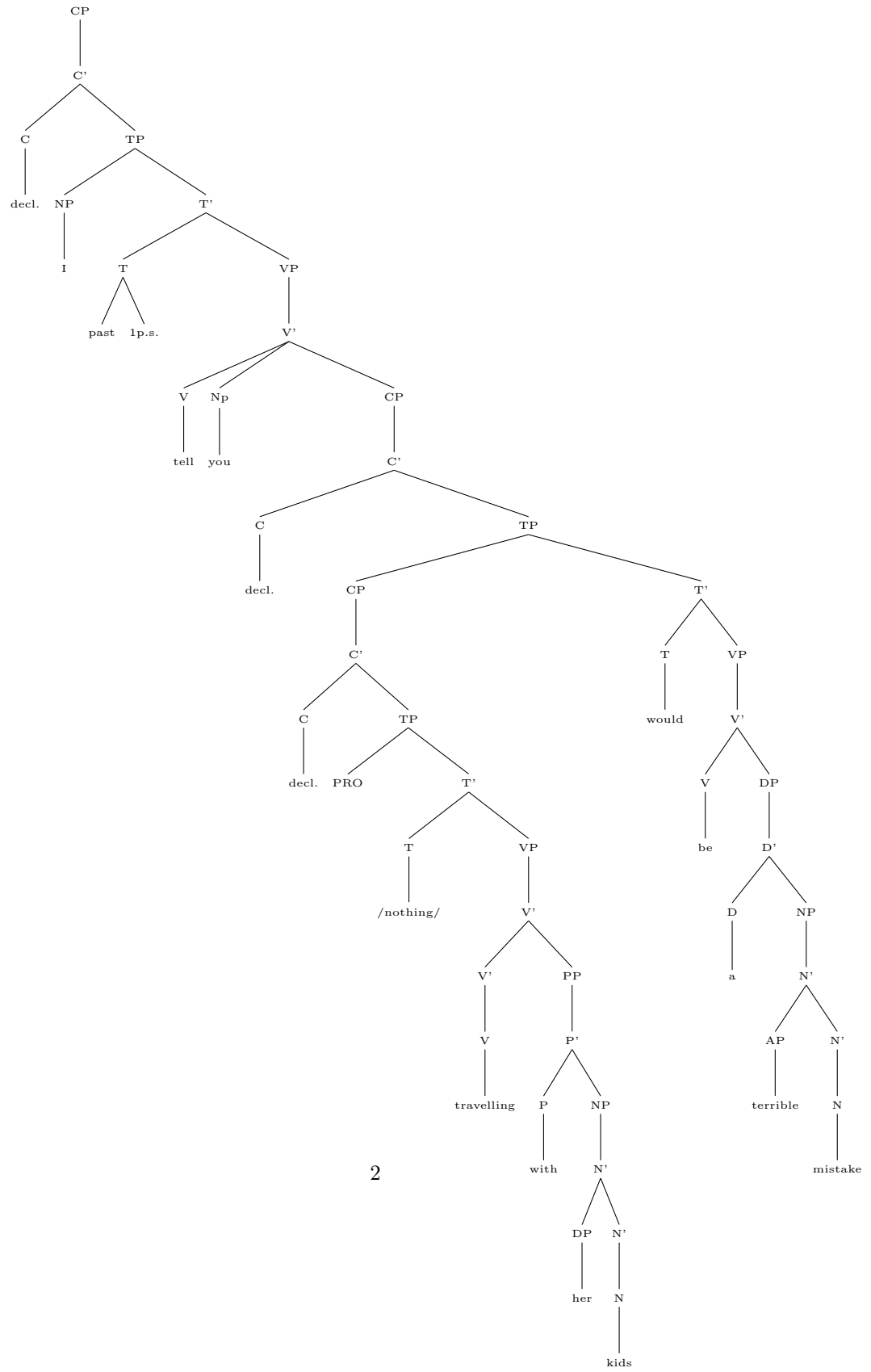
In English:
/ˈmaɪ ˈneɪm ɪz ˈmartɕin ən aɪ ˈstʌdɪ ˈnætʃərəl ˈlæŋgwədʒ ˈprəʊsesiŋ ət ðə ˈju-nɪvərsɪti əv ˈɡdɑɲsk ‖ bɪˈfɔ: ˈðæt | aɪ əˈtendəd ˈɪŋɡlɪʃ ˈstʌdiz ɪn kəˈʃalin | wə: aɪ ˈhəʊnd maɪ ˈləaŋgwədʒ ˈskɪlz ‖ ɪn maɪ ˈspə: ˈtaɪm aɪ ˈtraɪ tə ˈlə:n kəmˈpjʊtə ˈlæŋgwədzɪz ˈsʌtʃ æz ejtʃtiemel | sieses ænd si plʌs plʌs ‖/

In Polish:
/ˈɡram ˈruvɲɛʒ na ɡiˈtaʒɛ ɛlɛkˈtrɨt͡ʃnɛj v zɛsˈpɔlɛ/

3 Sentence - We told you travelling with kids would be a terrible mistake.

CP
C'
C TP
decl. NP T'
I T VP
past 1p.s. V'
V Np CP
tell you C'
C TP
decl. CP T'
C' T VP
C TP would V'
decl. PRO T' V DP
T VP be D'
/nothing/ V' D NP
V' PP a N'
V P' AP N'
travelling P NP terrible N'
with N' N
DP N' mistake
her N
kids

2

4 Section4

- Tapping:
  $$/t/ \rightarrow [\mathrm{r}] \ / \ [\ +\text{vowel}\ ]\_\begin{bmatrix} +\text{vowel} \\ \text{-stress} \end{bmatrix}$$

- Spirantization:
  $$\begin{bmatrix} +\text{stop} \\ \text{-voice} \end{bmatrix} \rightarrow \begin{bmatrix} +\text{voice} \\ \text{-stop} \\ +\text{fricative} \end{bmatrix} \ / \ [\ +\text{vowel}\ ]\_[\ +\text{vowel}\ ]$$

- Nasalization:
  $$[\ +\text{vowel}\ ] \rightarrow [\ +\text{nasal}\ ] \ / \ \_[\ +\text{nasal}\ ]$$

5 Section5

$$f(n+1, k+1) = \sum_{i=1}^{k+1} f(n, i)2^{k+1-i} + f(n, k+1)$$

6 Section6 - physics package

$$\nabla^2[\Psi+]\frac{\partial^n f}{\partial x^n} = \frac{\delta}{\delta V}(E - TS) + \delta F/\delta x$$