



## Real-time Tools for Exploring the English Language.

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### Abstract:

Teaching conversational English requires tools that support effective communication and are usable by both students and teachers alike. Research shows, that meaning-focused instruction is effective in developing a student's oral skills, but to achieve high levels of linguistic and socio-linguistic competency, a student must also concentrate on form. A wide range of tools are in fact needed. Artificial Intelligence (AI) can help with creating the necessary tools because a large number of linguistic topics are under active investigation by the AI community. For instance, tools that focus on fluency, discrete grammar points, meaning and communication style can already be constructed with existing technology. In addition to the breadth of tools needed, classroom-based tools must work in real-time and be perceived as an essential part of the conversation. Something else AI can help with. The concept of real-time tools for exploring the English language is a first step towards developing such a set of tools. This talk describes the tools created so far, the AI technology that underlies their operation and the problems met while utilizing software provided by the AI community. Creating applications for use in the classroom is challenging because limits cannot be placed on the subject matter. But available hardware is clearly limited. Looking for cost-effective hardware solutions led to the development of an SBC cluster for experimenting with the building of real-time tools. This cluster is also described along with the software created for experimenting with their creation.

### Biography:

Andrew Ernest Ritz has Masters degrees in Ergonomics (London University) and Signal Processing and Machine



intelligence (Surrey University). He has been working on Artificial Intelligence related problems since participating in the UK Alvey program in the 1980s. Recently, he is focussing on making the applications he has developed available on the web. These tools were created while working for his own company, Langtech, and funded in part by E NET Production, Katowice, Poland.

### Publication of speakers:

1. Ritz, A. 2020. Real-time Tools for Teaching English [Computer Software]. [Http://www.realtimetools.co.uk/](http://www.realtimetools.co.uk/)
2. X. Schmitt, S. Kubler, J. Robert, M. Papadakis and Y. Letraon, "A Replicable Comparison Study of NER Software: stanfordnlp, NLTK, opennlp, spacy, Gate," 2019 Sixth International Conference on Social Networks Analysis, Management and Security (SNAMS), Granada, Spain, 2019, pp. 338-343.
3. The Bullock Committee report, Her Majesty's Stationery Office, London, 1975.
4. George A. Miller (1995). Wordnet: A Lexical Database for English. Communications of the ACM Vol. 38, No. 11: 39-41.

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