Julien Tourille - PhD Student

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(last update: May 2017)

Current Position: PhD Student in Natural Language Processing

Since 2015 PhD in Computer Science, LIMSI, CNRS, Univ. Paris-Sud, Université Paris-Saclay

Topic Cross-Document Event Coreference in Electronic Health Records

Laboratory Laboratoire d'Informatique pour la Mécanique et les Sciences de l'Ingénieur

Advisors Olivier Ferret, Aurélie Névéol and Xavier Tannier

Description Important information for public health is locked in electronic patient records which are written in natural language. These records represent a considerable corpus,

which grows by several hundreds of thousands of documents every year per hospital. The retrospective analysis of these records allows health professionals to obtain a concise view of the healthcare pathways within their institutions. It allows to compare effective patient care to clinical guidelines in order i) to evaluate the quality of the healthcare pathway, ii) to highlight the steps of the pathway where specific care should be provided and iii) to further improve the diagnosis process and the therapeutic approach. In my PhD dissertation, I propose to develop natural language processing methods adapted to the clinical language, which will facilitate the summarization of information regarding healthcare pathways in the context of

retrospective analyses.

Education

Since 2015 PhD in Computer Science, LIMSI, CNRS, Univ. Paris-Sud, Université Paris-Saclay

2014-2015 MSc (second year) - Natural Language Processing with a specialization in Re-

search and Development, Paris Nanterre University, University of Paris III: Sor-

bonne Nouvelle, and INALCO \mid summa cum laude

2013–2014 MSc (first year) - Lexicography, Terminography et Automatic Corpus Processing,

University of Lille | summa cum laude

Publications

- [5] **Julien Tourille**, Olivier Ferret, Xavier Tannier, and Aurélie Névéol. "LIMSI-COT at SemEval-2017 Task 12: Neural Architecture for Temporal Information Extraction from Clinical Narratives". In: *Proceedings of the 11th International Workshop on Semantic Evaluation (SemEval 2017).* Vancouver, Canada: Association for Computational Linguistics, Aug. 2017.
- [4] Julien Tourille, Olivier Ferret, Xavier Tannier, and Aurélie Névéol. "Neural Architecture for Temporal Relation Extraction: A Bi-LSTM Approach for Detecting Narrative Containers". In: *Proceedings of the 55th Conference of the Association for Computational Linguistics*. Vancouver, Canada: Association for Computational Linguistics, Aug. 2017.
- [3] Julien Tourille, Olivier Ferret, Xavier Tannier, and Aurélie Névéol. "Temporal information extraction from clinical text". In: *Proceedings of the 15th Conference of the European Chapter of the Association for Computational Linguistics: Volume 2, Short Papers.* Valencia, Spain: Association for Computational Linguistics, Apr. 2017, pp. 739–745. URL: http://www.aclweb.org/anthology/E17-2117.
- [2] **Julien Tourille**, Olivier Ferret, Aurélie Névéol, and Xavier Tannier. "Extraction de relations temporelles dans des dossiers électroniques patient". In: *Actes de la 23ème Conférence sur Traitement Automatique des Langues Naturelles*. Paris, France, July 2016, pp. 459–466.
- [1] Julien Tourille, Olivier Ferret, Aurélie Névéol, and Xavier Tannier. "LIMSI-COT at SemEval-2016 Task 12: Temporal relation identification using a pipeline of classifiers". In: *Proceedings of the 10th International Workshop on Semantic Evaluation (SemEval 2016)*. Selected for the "Best of SemEval 2016". San Diego, California: Association for Computational Linguistics, June 2016, pp. 1136–1142. URL: http://www.aclweb.org/anthology/S16–1175.

Talks, Seminars and Posters

Apr. 2017	Presentation at THYME group bi-weekly meeting Location: Boston Children's
	Hospital, Boston, USA Topic: Temporal Information Extraction from Clinical Nar-
	ratives

- May 2016 Presentation at LIMSI PhD day | Location: LIMSI, CNRS, Saclay, France Topic: Cross-Document Event Coreference in Electronic Health Records
- Apr. 2016 **Poster at Digicosme Research Days** | Location: CentraleSupélec, Saclay, France Topic: Cross-Document Event Coreference in Electronic Health Records

Other Research Experience

2015 Master's thesis in Natural Language Processing

Title Automatic Detection of Epistemic Modality in Biomedical Texts

Laboratory MoDyCo Laboratory (CNRS UMR 7114), Nanterre, France

Advisor Delphine Battistelli

Topics – Modelization of the epistemic modality in biomedical scientific texts written in english.

- Conception and development of a modality tagger.

Research Internship in Natural Language Processing

Laboratory ITEC Laboratory, Kortrijk, Belgium

Advisor Hans Paulussen

Topics – Evaluation and optimization of a named entity recognition system developed for the IReadPlus project.

- Training and optimization of a Part-Of-Speech Tagger using the GRACE tagset.
- Conception and development of monitoring tools for the laboratory NLP pipeline.

Research Stays

2017 Research Stay at the Natural Language Processing Laboratory of the Boston Children's Hospital, Boston, USA | April 2017–May 2017

Awards

- 2017 Selected for the "Best of SemEval-2017" session, SemEval Workshop, Vancouver, Canada
- 2016 Selected for the "Best of SemEval-2016" session, SemEval Workshop, San Diego, USA

Funding

- 2015–2018 3-year PhD funding from the excellence laboratory center (labex) DigiCosme
 - 2017 Grant from the OpenHealth Institute for a research stay at the Natural Language Processing Laboratory of the Boston's Children Hospital, Boston, USA

Teaching Experience

2016–2017 University Institute of Technology, Univ. Paris-Sud, Université Paris-Saclay

- 1^{st} year undergraduate in computer science: digital documents and interfaces (1^{st} term) | Teaching assistant to Veronique Moriceau, Sylvie Delaët and Laurence Salvator
- 2^{nd} year undergraduate in computer science: advanced database techniques (1st term) | Teaching assistant to Nicolas Férey
- 1^{st} year undergraduate in computer science: **software production** (1^{st} term) Teaching assistant to Ana Lopez

2015–2016 University Institute of Technology, Univ. Paris-Sud, Université Paris-Saclay

- 2^{nd} year undergraduate in computer science: advanced database techniques (1st term) | Teaching assistant to Nicolas Férey
- 1^{st} year undergraduate in computer science: **object oriented design** (2^{nd} term) | Teaching assistant to Chantal Reynaud

Other Activities

- Reviewer for AMIA, SemEval and BMC Bioinformatics
- Organization of the 2016 edition of the LIMSI PhD day