Julien TOURILLE – PhD Student

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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	Xavier Tannier, Aurélie Névéol and Olivier Ferret
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 Research and Development**, Paris Nanterre University, University of Paris III: Sorbonne Nouvelle, and INALCO	summa cum laude
2013–2014	**MSc (first year) - Lexicography, Terminography et Automatic Corpus Processing**, University of Lille	summa cum laude

Doctoral Education

2018	**Introduction to research ethics and integrity**, Gif-sur-Yvette, France
2018	**Professional careers outside academia**, Orsay, France
2018	**Open access publication and bibliometrics**, Gif-sur-Yvette, France
2016	**Lisbon Machine Learning School (LxMLS)**, Lisbonne, Portugal
2015	**Teaching assistant basics**, Saclay, France

Other Training

2017   **Collaborative Institutional Training Initiative**
- Curriculum Group: Human Research
- Course Learner Group: Group 1 - Biomedical
- Stage: Stage 1 - Basic Course
- Description: Biomedical Investigators and Key Personnel Who Interact With Subjects
- Completion date: April 13, 2017
- Expiration date: April 20, 2020

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, pp. 597–602. URL: http://www.aclweb.org/anthology/S17-2098.

[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, pp. 224–230. URL: http://aclweb.org/anthology/P17-2035.

[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*. 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 Conférence Traitement Automatique des Langues Naturelles (TALN 2016)*. Paris, France: Association pour le Traitement Automatique des Langues, July 2016, pp. 459–466. URL: https://jep-taln2016.limsi.fr/actes/Actes%20JTR-2016/Papers/T90.pdf.

[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)*. San Diego, California: Association for Computational Linguistics, June 2016, pp. 1136–1142. URL: http://www.aclweb.org/anthology/S16-1175.

Talks, Seminars, Posters and Demonstrations

Jan. 2018	**Doctoral seminar**	Location: LIMSI, Orsay, France	Title: Yet Another SEquence Tagger (YASET)
Dec. 2017	**System demonstration at *Journée e-santé***	Location: NanoInnov, Palaiseau, France System: Yet Another SEquence Tagger (YASET)
Nov. 2017	**Presentation at OpenHealth seminar**	Location: OpenHealth Institute, Paris, France Topic: Détection automatique de la coréférence événementielle dans les dossiers patients électroniques
Jun. 2017	**Doctoral seminar**	Location: LIMSI, Orsay, France	Title: Temporal Analysis in Electronic Health Records
Apr. 2017	**Presentation at THYME group bi-weekly meeting**	Location: Boston Children's Hospital, Boston, USA	Topic: Temporal Information Extraction from Clinical Narratives
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.

2014	**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

2017–2018 **University Institute of Technology**, Univ. Paris-Sud, Université Paris-Saclay
- 1st year undergraduate in computer science: **digital documents and interfaces** (1st term) | Teaching assistant to Benjamin Hellouin
- 2nd year undergraduate in computer science: **advanced database techniques** (1st term) | Teaching assistant to Nicolas Férey
- 1st year undergraduate in computer science: **object oriented design** (2nd term) | Teaching assistant to Chantal Reynaud

2016–2017 **University Institute of Technology**, Univ. Paris-Sud, Université Paris-Saclay
- 1st year undergraduate in computer science: **digital documents and interfaces** (1st term) | Teaching assistant to Veronique Moriceau, Sylvie Delaët and Laurence Salvator
- 2nd year undergraduate in computer science: **advanced database techniques** (1st term) | Teaching assistant to Nicolas Férey
- 2nd year undergraduate in computer science: **software production** (1st term) Teaching assistant to Ana Lopez

2015–2016 **University Institute of Technology**, Univ. Paris-Sud, Université Paris-Saclay
- 2nd year undergraduate in computer science: **advanced database techniques** (1st term) | Teaching assistant to Nicolas Férey
- 1st year undergraduate in computer science: **object oriented design** (2nd term) | Teaching assistant to Chantal Reynaud

Other Activities

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