Jeremy Barnes

Curriculum Vitae

Work Experience

2018-current **Postdoctoral Fellow**, Language Technology Group, University of Oslo.

2015–2018 **Teaching Assistant**, *Pompeu Fabra University*, Barcelona.

2008–2015 **Teacher of English as a Foreign Language**, *Institute for North American Studies (IEN)*, Barcelona.

Education

2015–2019 **PhD in Computational Linguistics**, *Pompeu Fabra University*, Barcelona. Cum Laude / International Mention

2017–2018 **Research Stay**, *University of Stuttgart*, Stuttgart. Supervisors: Roman Klinger and Sabine Schulte im Walde

2014–2015 **Masters in Linguistics**, *Pompeu Fabra University*, Barcelona, *GPA – 9.23*. Cum Laude

2001–2007 **Bachelors in Linguistics**, *The University of Houston*, Houston, *GPA – 8.5*. Magna cum Laude

Doctoral Thesis

Title Cross-lingual Sentiment Analysis for Under-resourced Languages

Supervisors Toni Badia & Patrik Lambert

Committee Sebastian Padó, Alexandra Balahur & Horacio Saggion

Description This thesis explored machine learning techniques which require a minimal amount of parallel data to perform sentiment analysis in a resource-poor target language using only annotated sentiment data in a resource-rich language. I performed experiments with deep learning methods at several levels of granularity, achieving state-of-the-art results on several tasks and also showed that the techniques developed could be used for neural domain adaptation.

Teaching Experience

2020 Neural Methods in Natural Language Processing: IN5550, University of Oslo,

I am currently contributing to the planning and creation of course materials, and will give lectures and grade assignments.

- 2018 **Invited Lecturer, Sentiment Analysis for Big Data**, *Center for Language and Computation, University of Barcelona*, Barcelona.
 - I gave a 3-hour lecture on basics of deep learning for sentiment classification, state-of-the-art machine-learning methods, and current challenges for a Master's level NLP program.
- 2015–2018 Information Technology, Pompeu Fabra University, Barcelona.

I acted as assistant lecturer for the lab sessions in a mandatory Bachelor's course. I ran the lab sessions, where students humanities students were introduced to concepts of information technology, and graded assignments, as well as the final exams.

- 2015–2017 Language and Technology: Case Studies, *Pompeu Fabra University*, Barcelona. I acted as assistant lecturer for the lab sessions in an elective Bachelor's course. I ran the lab sessions, which concentrated on introducing instances of language technology, and graded assignments. I additionally created pedagogical material (slides and small code exercises) in collaboration with the main lecturers.
 - 2017 **Translation Technology**, *Pompeu Fabra University*, Barcelona.

I acted as assistant lecturer for the lab sessions in a mandatory Bachelor's course. I ran the practical sessions, where we introduced translation students to basic ideas of corpus linguistics, CAT tools, translation memories, and text processing.

2017 Affective Computing and Emotion Analysis, *University of Stuttgart*, Stuttgart. I served as a teaching assistant for this Master's course on machine learning and deep learning methods for affective computing. I helped organize the class, proposed materials, interacted with students, and graded exams.

Supervision

- 2019-2020 **Egil Rønningstad**, Master's Thesis: Fine-grained Sentiment Analysis for Low-resource Languages, University of Oslo.

 Co-supervision with Lilja Øvrelid.
 - Irean Navas Alejo, Master's Thesis: Cross-lingual Approaches to Fine-grained Emotion Analysis, Pompeu Fabra University.
 Co-supervision with Toni Badia.
 - 2018 Àlex R. Atrio, Master's Thesis: Reordering for Cross-lingual Sentiment Analysis, Pompeu Fabra University.

 Co-supervision with Toni Badia.
 - 2017 **Yibing Yang**, *Master's Thesis: Extraction of Sentiment Aspects in Catalan*, Pompeu Fabra University.

 Co-supervision with Toni Badia.

Publications

Journal Publications

Jeremy Barnes and Roman Klinger. 2019. *Embedding Projection for Targeted Cross-Lingual Sentiment: Model Comparisons and a Real-World Study*. Journal of Artificial Intelligence Research.

Jeremy Barnes, Erik Velldal, Lilja Øvrelid. 2019. *Improving Sentiment Analysis with Multi-task Learning of Negation*. Journal of Natural Language Engineering - Special Issue on Processing Negation.

Peer-Reviewed Conference Publications

Jeremy Barnes, Roman Klinger, and Sabine Schulte im Walde. 2018. *Bilingual Sentiment Embeddings: Joint Projection of Sentiment Across Languages*. ACL 2018. Pages 2483–2493. *Acceptance rate: 24.9%*.

Jeremy Barnes, Roman Klinger, and Sabine Schulte im Walde. 2018. *Projecting Embeddings for Domain Adaption: Joint Modeling of Sentiment Analysis in Diverse Domains*. COLING 2018. Pages 818–830. *Acceptance rate: 37.4%*.

Jeremy Barnes, Patrik Lambert, and Toni Badia. 2016. Exploring Distributional Representations and Machine Translation for Aspect-based Cross-lingual Sentiment Classification. COLING 2016. Pages 1613–1623. Acceptance rate: 32%.

Àlex R. Atrio, Toni Badia, Jeremy Barnes. 2019. On the Effect of Word Order on Cross-lingual Sentiment Analysis. SEPLN 2019. Received Best Paper Award.

Petter Mæhlum, Jeremy Barnes, Lilja Øvrelid, Erik Velldal. 2019. Annotating evaluative sentences for sentiment analysis: a dataset for Norwegian. NoDaLiDa 2019.

Jeremy Barnes, Samia Touileb, Lilja Øvrelid, Erik Velldal. 2019. Lexicon Information in Neural Sentiment Analysis: a Multi-task Learning Approach. NoDaLiDa 2019.

Jeremy Barnes, Patrik Lambert, and Toni Badia. 2018. *MultiBooked: A Corpus of Basque and Catalan Hotel Reviews Annotated for Aspect-level Sentiment Classification*. LREC 2018. Pages 656–660.

Peer-Reviewed Workshop Publications

Jeremy Barnes, Roman Klinger, and Sabine Schulte im Walde. 2017. Assessing State-of-the-art Sentiment Models on State-of-the-art Sentiment Datasets. WASSA 2017. Pages 2–12. Cited 25 times in 2 years.

Hendrik Schuff, Jeremy Barnes, Julian Mohme, Sebastian Padó, and Roman Klinger. 2017. Annotation, Modelling and Analysis of Fine-grained Emotions on a Stance and Sentiment Detection Corpus. WASSA 2017. Pages 13–23. Cited 14 times in 2 years.

Jeremy Barnes, Lilja Øvrelid, Erik Velldal. 2019. Sentiment Analysis Is Not Solved! Assessing and Probing Sentiment Classification. BlackBoxNLP Workshop at ACL 2019. Pages 12–23.

Çagri Çöltekin, Jeremy Barnes. 2019. Neural and Linear Pipeline Approaches to Cross-lingual Morphological Analysis. VarDial Workshop 2019.

Jeremy Barnes. 2019. LTG-Oslo Hierarchical Multi-task Network: The importance of negation for document-level sentiment in Spanish. NEGES Workshop at SEPLN 2019.

Awards and Fellowships

2019 **Best Paper Award**, Sociedad Española de Procesamiento de Lenguaje Natural (SEPLN 2019), Bilbao.

2016–2019 **SGR-DTCL Predoctoral Scholarship**, *Pompeu Fabra University*, Barcelona.

2017–2018 SFB Collaborative Research Grant, University of Stuttgart, Stuttgart.

2005–2006 DAAD Leipzig/Houston Scholarship, University of Leipzig, Leipzig.

2001–2006 Academic Merit Scholarship, *University of Houston*, Houston.

Computer skills

Systems Linux, Windows

Languages Python, Java, R

Libraries Pytorch, Tensorflow, Theano, Keras, Sklearn, Numpy, Matplolib, NLTK, Freeling,

Stanford CoreNLP, IXA pipes, Moses, OpenNMT

Languages

English Mothertongue

Spanish C.2 Excellent written and spoken level

Catalan C.1 Good written and spoken level

Basque C.1 Good written and spoken level

German B.2 Good written level and adequate spoken level

Norwegian B.2 Good written level and adequate spoken level