# Jeremy Barnes

# Curriculum Vitae

## Education

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

2017–2018 **Research Stay**, *University of Stuttgart*, Stuttgart.

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*. Summa cum Laude

## **Doctoral Thesis**

Title Cross-lingual Sentiment Analysis for Under-resourced Languages

Supervisors Toni Badia & Patrik Lambert

Description This thesis explored 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 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 domain adaptation.

# Teaching Experience

- 2020 **Neural Methods in Natural Language Processing**, *University of Oslo*, Oslo. I am currently contributing to the planning and creation of course materials, and will give lectures and grade assignments.
- 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 sentiment classification, state-of-the-art 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. I helped organize and grade 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.
  - 2019 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**

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 Natural Language Engineering - Special Issue on Processing Negation.

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.

Petter Mæhlum, Jeremy Barnes, Lilja Øvrelid, Erik Velldal. 2019. *Annotating evaluative sentences in 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.

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

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

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

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.

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.

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.

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.

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.

# Awards and Fellowships

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

Norwegian **B.2** 

Spanish	<b>C</b> .2	Excellent written and spoken level
Catalan	<b>C</b> .1	Good written and spoken level
Basque	<b>C</b> .1	Good written and spoken level
German	B.2	Good written level and adequate spoken level

Good written level and adequate spoken level