

# Jeremy Barnes

## Curriculum Vitae

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### Work Experience

- 2021–current **Assistant Professor**, *IXA Group*, University of the Basque Country EHU/UPV.
- 2018–2021 **Postdoctoral Fellow**, *Language Technology Group*, University of Oslo.
- 2015–2018 **Teaching Assistant**, *Pompeu Fabra University*, Barcelona.
- 2009–2015 **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

### Teaching Experience

- 2022 **Computational Syntax**, *University of the Basque Country EHU/UPV*, Donostia, Masters: Language Analysis and Processing.  
I created course material and gave lectures on Finite-state Approaches to Syntax: N-gram models, Hidden Markov Models, Part-of-Speech tagging, Chunking, and Information Extraction.
- 2021 **Foundations of Computer Science**, *University of the Basque Country EHU/UPV*, Bilbao, Undergrad: Mechanical Engineering.  
I gave both theoretical classes, which introduce basic concepts of computer science, as well as the practical lab sessions, which introduce the students to programming in C.
- 2021 **Foundations of Computer Science**, *University of the Basque Country EHU/UPV*, Bilbao, Undergrad: Mechanical Engineering.  
I gave both theoretical classes, which introduce basic concepts of computer science, as well as the practical lab sessions, which introduce the students to programming in C.
- 2020–2021 **Neural Methods in Natural Language Processing: IN5550**, *University of Oslo*, Oslo, Masters/PhD: Language Technology.  
I contributed to the planning and creation of course materials, gave lectures on Linear Models, Deep Neural Networks and Transformer models and graded final assignments.

- 2020 **Introduction to Artificial Intelligence and Machine Learning: IN3050**, *University of Oslo*, Oslo, Undergrad/Masters/PhD: Language Technology.  
I contributed by creating course material and giving a lecture on state-of-the-art Natural Language Processing models.
- 2015–2018 **Information Technology**, *Pompeu Fabra University*, Barcelona, Undergrad: Applied Linguistics.  
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, Undergrad: Applied Linguistics.  
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, Undergrad: Applied Linguistics.  
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, Masters: Language Technology.  
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

- 2020-2022 **Markus Sverdvik Heiervang**, *Master's Thesis: Intelligent Title Answering System to Combat Click-bait Culture*, University of Oslo.  
Co-supervision with Pierre Lison.
- 2020-2021 **Mathias Bendiksen Krafft**, *Master's Thesis: Multi-task Learning for Sentiment Analysis*, University of Oslo.  
Co-supervision with Lilja Øvrelid.
- 2019-2020 **Egil Rønningstad**, *Master's Thesis: Targeted Sentiment Analysis for Norwegian Text*, University of Oslo.  
Co-supervision with Lilja Øvrelid.
- 2020 **Antonio Martínez García**, *Master's Thesis: Cross-lingual transfer: Evaluating the effect of morphological typology on zero-shot cross-lingual tasks*, Pompeu Fabra University.  
Co-supervision with Toni Badia.
- 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.

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## Invited Talks

- 17.12.2021 **Keynote presentation**, *The 10th International Conference on Analysis of Images, Social Networks and Texts, Tbilisi, Georgia*, I gave a keynote speech on moving beyond sentence classification in large-scale benchmarking..
- 15.3.2021 **Invited Lecturer, MA8701 Advanced Statistical Methods in Inference and Learning**, *Norwegian University of Science and Technology (NTNU), Trondheim*, I gave an invited lecture together with Samia Touileb on analyzing text with neural networks for a PhD level statistics program..
- 18.1.2021 **Northern Lights Deep Learning Workshop 2021**, *The Arctic University of Norway (UiT), Tromsø*, Transfer Learning in NLP: State of the art and outstanding challenges.  
I gave an invited tutorial together with Lilja Øvrelid on state-of-the-art deep learning approaches in NLP.
- 18.11.2020 **Big Insight seminar**, *Norsk Regnesentral (Norwegian Computing Center), Oslo*, I gave an invited talk on transfer learning in NLP, including state-of-the-art approaches and outstanding challenges.
- 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.

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## Publications

### Journal Publications

- **Jeremy Barnes**, Erik Velldal, Lilja Øvrelid. 2020. *Improving Sentiment Analysis with Multi-task Learning of Negation*. Journal of Natural Language Engineering - Special Issue on Processing Negation. Pages 1–21.
- **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. Vol. 66. Pages 691-742.

### Peer-Reviewed Conference Publications

- **Jeremy Barnes**, Robin Kurtz, Stephan Oepen, Lilja Øvrelid and Erik Velldal. 2021. *Fine-grained Sentiment Analysis as Dependency Graph Parsing*. ACL 2021.
- Antonio Martínez-García, Toni Badia and **Jeremy Barnes**. 2021. *Evaluating Morphological Typology in Zero-shot Cross-lingual Transfer*. ACL 2021.
- Samia Touileb and **Jeremy Barnes**. 2021. *The Interplay Between Language Similarity and Script on a Novel Multi-layer Algerian Dialect Corpus*. Findings of ACL 2021.
- Pierre Lison, **Jeremy Barnes**, Aliaksandr Hubin. 2021. *Skweak: Weak Supervision Made Easy for NLP*. ACL 2021 Demo track.

- Andrew Moore and **Jeremy Barnes**. 2021. *Multi-task Learning of Negation and Speculation for Targeted Sentiment Classification*. NAACL 2021.
- **Jeremy Barnes**, Lilja Øvrelid, Erik Velldal. 2021. *If you've got it, flaunt it: Making the most of fine-grained sentiment annotations* EACL 2021.
- Pierre Lison, **Jeremy Barnes**, Aliaksandr Hubin, Samia Touileb. 2020. *Named Entity Recognition without Labelled Data: A Weak Supervision Approach*. ACL 2020. Acceptance rate: 23.9%.
- Lilja Øvrelid, Petter Mæhlum, **Jeremy Barnes**, Erik Velldal. 2020. *A Fine-Grained Sentiment Dataset for Norwegian*. LREC 2020.
- 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.
- **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%.

#### Peer-Reviewed Workshop Publications

- Irean Navas Alejo, Toni Badia, and **Jeremy Barnes**. 2020. *Cross-lingual Emotion Intensity Prediction*. PEOPLES Workshop at COLING 2020.
- **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.
- Çağrı 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.

- **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.

## Grants

- 2021 **Tekst Hub**, Norway, Awarded 74,140 NOK (7,334 Euro) to hire annotators and create a corpus of Norwegian written dialectal use: NorDial.

## Academic Service

- 2022 **WASSA-2022**, *Leading organizer for the 12th Workshop on Computational Approaches to Subjectivity, Sentiment & Social Media Analysis*.
- 2022 **SemEval**, *Main organizer for shared task on structured sentiment analysis*.
- 2020 **EACL**, *Area Chair for Sentiment Analysis, Stylistic Analysis, and Argument Mining*.
- 2016–Current **Reviewer for ACL, EMNLP, NAACL, EACL, COLING, \*SEM, CONLL, WASSA, Natural Language Engineering**.

## Awards and Fellowships

- 2020 **Outstanding Doctoral Dissertation Award**, Pompeu Fabra University, Barcelona.
- 2019 **Best Paper Award**, 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, Matplotlib, NLTK, Freeling, Stanford CoreNLP, IXA pipes, Moses, OpenNMT

## Languages

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|-----------|---------------------|---|
| English   | <b>Mothertongue</b> |   |
| Spanish   | <b>C.2</b>          | <i>Excellent written and spoken level</i>           |
| Catalan   | <b>C.1</b>          | <i>Good written and spoken level</i>                |
| Basque    | <b>C.1</b>          | <i>Good written and spoken level</i>                |
| German    | <b>B.2</b>          | <i>Good written level and adequate spoken level</i> |
| Norwegian | <b>B.2</b>          | <i>Good written level and adequate spoken level</i> |