# Jeremy Barnes

# Curriculum Vitae

# 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

2021 **Foundations of Computer Science**, *University of the Basque Country EHU/UPV*, Bilbao.

I gave both theoretical classes, which introduce basic concepts of computer science, as well ass 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.

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.

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.

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

- 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.
- 2020-2021 **Adrian Eriksen**, *Master's Thesis: Domain Adaptation via Transfer Learning*, University of Oslo.

  Co-supervision with Erik Velldal.
- 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.

# Invited Talks

- 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  $\emptyset$ vrelid 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.

#### **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.
- 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.
- 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, 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