Maurício Gruppi

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mgruppi.me

- Machine Learning
- Natural Language Processing
- Representation Learning
- Misinformation

EDUCATION

PhD, Computer Science | Rensselaer Polytechnic Institute, USA — **Sep 2017 — Jan 2023 [Expected]**
M.Sc, Computer Science | Federal University of Viçosa, Brazil — **Mar 2014 — Nov 2016**
B.Sc, Computer Science | Federal University of Viçosa, Brazil — **Mar 2009 — Feb 2014**

RESEARCH EXPERIENCE

Graduate Research Assistant — **Sep 2019 — Aug 2021**
Rensselaer Polytechnic Institute, USA

- **Advisors**: Sibel Adalı(RPI), Pin-Yu Chen(IBM) | **Funding**: IBM
- Investigated and developed methods to model lexical semantic differences across communities and groups of speakers of a given language. This was achieved by combining word embeddings and alignment techniques as well as self-supervised learning to optimized the alignment.

Undergraduate Research Assistant — **Sep 2012 — Feb 2013**
Hanze Institute of Technology, The Netherlands

- **Advisor**: Fenna Feenstra | **Funding**: CAPES/Nuffic
- Assisted in the development of a low-cost eye-tracking device, using off-the-shelf hardware components and open source software, to provide accessibility alternatives to physically disabled primary school students.

Undergradute Research Assistant — **Mar 2011 — Jan 2012**
Federal University of Viçosa, Brazil

- **Advisor**: Marcus V. Alvim Andrade | **Funding**: Fapemig
- Developed and applied heuristics to determine the optimal point on a terrain to build a water reservoir, avoiding potential damage caused to communities and wildlife in the surrounding area.

TEACHING EXPERIENCE

Graduate Teaching Assistant — **Sep 2017 — May 2019**
Rensselaer Polytechnic Institute, USA

- Assisted in programming and data structures courses and labs (Python, C++ and Visual Basic).

Lecturer — **May 2015 — May 2017**
Federal University of Viçosa, Brazil

- Taught programming courses to undergraduate students (C++ and Python).

Graduate Teaching Assistant — **Mar 2014 — Dec 2014**
Federal University of Viçosa, Brazil

- Provided assistance to programming lab sections.

WORK EXPERIENCE

Front-end Developer — **May 2019 — Aug 2019**
Rensselaer Polytechnic Institute, USA

- Worked as front-end developer for the MetPetDB project at RPI over the summer of 2019 (HTML, Javascript and Python).

Front-end Developer — **May 2014 — May 2015**
Federal University of Viçosa, Brazil

- Developed educational games and applications to support remote learning for high school and undergraduate students (Flash and ActionScript).

SKILLS

Programming	Python, C++, C, HTML, Javascript, Java, Visual Basic.
Machine Learning	Scikit-learn, PyTorch, Tensorflow, SpaCy.
Front-end	HTML5, Bootstrap, JQuery.
Back-end	Python: Flask, Django-Rest API. Databases: Postgres, SQLite, SQL Server.

COMMUNITY SERVICE

Reviewer
- (Journal) Transactions on Audio, Speech, and Language Processing
- (Journal) Information Processing & Management
- (Conference) ICWSM
- (Workshop) LChange'21
- (Workshop) SemEval 2020

PUBLICATIONS

1. **Gruppi, M.**, Adali, S. & Chen, P.-Y. *SenSE: A Toolkit for Semantic Change Exploration via Word Embedding Alignment* in *To appear in: Proceedings of the AAAI Conference on Artificial Intelligence* (2022). https://sense.mgruppi.me/.

2. **Gruppi**, M., Adali, S. & Chen, P.-Y. *System Demonstration – SenSE: A Toolkit for Semantic Change Exploration via Word Embedding Alignment* in *To appear in: Conference on Neural Information Processing Systems (NeurIPS)* (2021).

3. **Gruppi, M.**, Chen, P.-Y. & Adali, S. *Fake it Till You Make it: Self-Supervised Semantic Shifts for Monolingual Word Embedding Tasks* in *Proceedings of the AAAI Conference on Artificial Intelligence* **35** (2021), 12893–12901.

4. **Gruppi, M.**, Adali, S. & Chen, P.-Y. *SChME at SemEval-2020 Task 1: A Model Ensemble for Detecting Lexical Semantic Change* in *Proceedings of the Fourteenth Workshop on Semantic Evaluation* (2020), 105–111.

5. Trujillo, M. *et al. What is BitChute? Characterizing the* in *Proceedings of the 31st ACM Conference on Hypertext and Social Media* (2020), 139–140.

6. **Gruppi**, M., Horne, B. D. & Adalı, S. NELA-GT-2020: A Large Multi-Labelled News Dataset for The Study of Misinformation in News Articles. *arXiv preprint arXiv:2102.04567* (2021).

7. Horne, B. D., **Gruppi, M.** & Adali, S. *Trustworthy misinformation mitigation with soft information nudging* in *2019 First IEEE International Conference on Trust, Privacy and Security in Intelligent Systems and Applications (TPS-ISA)* (2019), 245–254.

8. **Gruppi**, M., Horne, B. D. & Adali, S. An Exploration of Unreliable News Classification in Brazil and The US. *arXiv preprint arXiv:1806.02875* (2018).

9. **Gruppi**, M. G. *et al.* using rational numbers and parallel computing to efficiently avoid round-off errors on map simplification. *Revista Brasileira de Cartografia* **68** (2016).

10. **G. Gruppi**, M. *et al. An Efficient and Topologically Correct Map Generalization Heuristic* in *Proceedings of the 17th International Conference on Enterprise Information Systems-Volume 1* (2015), 516–525.