

Eva García-Martín

PhD Candidate at Blekinge Institute of Technology ◊ Karlskrona, Sweden

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EDUCATION

Doctor of Philosophy in Computer Science

2015 - Present

Department of Computer Science and Engineering
Blekinge Institute of Technology, Karlskrona, Sweden.
Thesis focus: Energy Efficiency in Machine Learning
Advisors: Niklas Lavesson, Håkan Grahm

MSc in Computer Science

2012 - 2013

Department of Computer Science and Engineering
Blekinge Institute of Technology, Karlskrona, Sweden.

BSc in Telecommunications Engineering

2009 - 2013

Department of Telecommunications Engineering
Rey Juan Carlos University, Madrid, Spain.

Graduate Courses: Machine Learning, Deep Learning, Machine Learning Algorithm Accelerator Co-Design, Applied Artificial Intelligence, Data Mining & Knowledge Discovery, Statistical Methods for Computer Science and Software Engineering, Theoretical Aspects in Computer Science, Research Ethics.

EXPERIENCE

Blekinge Institute of Technology

2015 - Present

Doctoral student in Computer Science

- Designed and developed energy efficient machine learning algorithms using Python, C, Java, PyTorch, and Scikit-learn among others.
- Developed scalable streaming decision tree algorithms for real-time prediction on big data streams.
- Applied a computer architecture focus to make machine learning algorithms feasible to run on mobile and embedded devices.

Télécom ParisTech

Oct 2018 - Nov 2018

Research stay

- Research stay at Télécom ParisTech to work with Prof. Albert Bifet on energy efficient data streams.

Indra

June 2014 - Dec 2014

Business Analyst Consultant

- Social network analysis and data science using Mongo DB, Python, Twitter API, R and Java.

Finja5

May 2013 - Sep 2013

Open Source and Social Innovation researcher

- Internship at Finja5 as a consultant for Novatium where I designed and developed web applications using Python, PHP, Javascript, Java, Apache and MySQL.

TECHNICAL SKILLS

Programming Languages/Tools:	Python, Java, C, R, Matlab, Scikit-learn, PyTorch, NumPy
Cloud Platform	Google Cloud
Web Languages/Tools	HTML, JavaScript, CSS, Django, SQL
Source Code Management Tools	Subversion, Git
Other	L ^A T _E X, Vim, Bash

PUBLICATIONS

Journals

- Abghari, S., **García-Martín, E.**, Johansson, C., Lavesson, N., & Grahm, H. *Trend analysis to automatically identify heat program changes*. Energy Procedia, 116, 407-415, (2017).
- **García-Martín E.**, Lavesson N., & Doroud M. *Hashtags and followers: An experimental study of the on-line social network Twitter*, Social Network Analysis and Mining (SNAM), 6(1)(pp. 1-15), Springer, (2016).

Book Chapters

- **García-Martín E.**, Lavesson N., & Grahm H. *Energy Efficiency Analysis of the Very Fast Decision Tree algorithm*. In: Missaoui R., Abdessalem T., Latapy M. (eds) Trends in Social Network Analysis. Lecture Notes in Social Networks, (pp. 229-252), Springer, (2017).

Conferences

- **García-Martín E.**, Lavesson N., Grahm H., Casalicchio E., & Boeva V. *Hoeffding Trees with n_{min} adaptation*. The 5th IEEE International Conference on Data Science and Advanced Analytics, (2018).
- **García-Martín E.**, Lavesson N., & Grahm H. *Identification of Energy Hotspots: A Case Study of the Very Fast Decision Tree*. In: Au M., Castiglione A., Choo KK., Palmieri F., Li KC. (eds) Green, Pervasive, and Cloud Computing. GPC 2017. LNCS, 10232, (pp. 267-281), Springer, (2017).
- Lundberg L., Lennerstad H., **García-Martín E.**, Lavesson N., Boeva V. *Increasing the Margin in Support Vector Machines through Hyperplane Folding*, 26th Annual Machine Learning Conference of the Benelux (Benelearn), (2017).
- **García-Martín E.**, Lavesson N., & Grahm H. *Energy Efficiency in Data Stream Mining*. 2015 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM).

Workshop papers

- **García-Martín E.**, Lavesson, N., Grahm, H., Casalicchio, E., & Boeva, V. (2018). *How to Measure Energy Consumption in Machine Learning Algorithms*. In Green Data Mining, 1st International Workshop on Energy Efficient Data Mining and Knowledge Discovery held in conjunction with ECML-PKDD 2018. Lecture Notes in Computer Science. Springer. (To appear)
- **García-Martín E.**, Lavesson N., Grahm H., & Boeva V. (2017). *Energy Efficiency in Machine Learning: A position paper*. In 30th Annual Workshop of the Swedish Artificial Intelligence Society SAIS 2017, May 15–16, 2017, Karlskrona, Sweden 137, (pp. 68-72). Linköping University Electronic Press.
- **García-Martín E.**, & Lavesson N. (2017) *Is it ethical to avoid error analysis?* 2017 Workshop on Fairness, Accountability, and Transparency in Machine Learning (FAT/ML 2017), held in conjunction with the 23rd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, <https://arxiv.org/abs/1706.10237>

- **García-Martín E.**, Lavesson N., Grahm H., Casalicchio E., & Boeva V. (2017) *Adaptive Very Fast Decision Tree, preliminary results*. in 12th Women in Machine Learning Workshop (WiML 2017), in conjunction with NIPS 2017, December 2017, Long Beach, USA. Presented as a poster
- **García-Martín E.**, Lavesson N., Grahm H., Casalicchio E., & Boeva V. (2017) *Adaptive Very Fast Decision Tree, preliminary results*. in 5th Swedish Workshop in Data Science (SweDS 2017), December 2017, Gothenburg, Sweden.
- **García-Martín E.**, Lavesson N., & Grahm H. *Energy Efficiency in Machine Learning*. (2016) 4th Swedish Workshop on Data Science (SweDS 2016).

PROFESSIONAL SERVICE

Organizer, ECML-PKDD Workshop on "Energy Efficient Data Mining and Knowledge Discovery", 2018. <https://greendatamining.github.io>

Co-organizer, Women in Machine Learning Dinner at International Conference on Machine Learning (ICML) 2018, Stockholm, Sweden.

Program Committee Member, Workshop on Container-based Systems for Big Data, Distributed and Parallel computing, 2018.

Program Committee Member, Grace Hooper Celebration (GHC), 2018, 2019.

Reviewer, Journal of Machine Learning Research (JMLR), 2018.

Reviewer, International Conference on Machine Learning (ICML), 2018.

Reviewer, Volunteer, Women in Machine Learning Workshop, 2016, 2017.

Volunteer, Annual Workshop of the Swedish Artificial Intelligence Society SAIS. 2017.

Reviewer, European Conference on Machine Learning (ECML-PKDD), 2016.

Reviewer, Neural Information Processing Systems (NeurIPS), 2016.

Reviewer, Association for the Advancement of Artificial Intelligence (AAAI), 2016.

Reviewer, Social Network Analysis and Mining (SNAM), 2016, 2017, 2018.

LANGUAGES

English, Spanish	Full professional proficiency
Swedish, Italian, French	Limited working proficiency

TEACHING

Co-Instructor, Machine Learning (DV2542). Department of Computer Science and Engineering, Blekinge Institute of Technology, Karlskrona, Sweden. 2015, 2016, 2017.

Teaching Assistant, C Programming (DV1550). Department of Computer Science and Engineering, Blekinge Institute of Technology, Karlskrona, Sweden. 2015, 2016, 2017.

Teaching Assistant, Agent Systems (DV2541). Department of Computer Science and Engineering, Blekinge Institute of Technology, Karlskrona, Sweden. 2015, 2016, 2017.

REFERENCES

Provided upon request.