Buelent Uendes

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PROFILE

ML researcher working on explainability and self-supervised learning for time series data. Driven by a desire to bridge the gap between AI research and practice, with a particular interest in healthcare and education.

EDUCATION

Vrije Universiteit Amsterdam, Amsterdam, the Netherlands

- Ph.D. in Computer Science — Apr 2023 – present
  - Ph.D. project as part of the Stress-in-Action project funded by the Dutch research council
  - Focus: Time-series data, Trustworthy AI, Mental stress detection
  - Adviser: Prof. Mark Hoogendoorn, Prof. Bernard P. Veldkamp, Dr. Shujian Yu

Barcelona School of Economics, Barcelona, Spain

- M.Sc. in Data Science — Sep 2020 – Jun 2021
  - Relevant Course Work: Machine Learning, Deep Learning, Reinforcement Learning
  - Cumulative GPA: 8.4/10. (Excellent)

Lund University, Lund, Sweden

- M.Sc. in Economics — Aug 2018 – Aug 2020
  - Specialization: Econometrics and Statistics
  - Cumulative GPA: A (Top 5% of the cohort)

University of Hohenheim, Stuttgart, Germany

- B.Sc. in Business Administration and Economics — Oct 2013 – Jul 2017
  - Cumulative GPA: 1.2 (Top 1% of the cohort)

WORK EXPERIENCE

Junior AI Lecturer, Vrije Universiteit Amsterdam, Amsterdam, the Netherlands — Sep 2021 – Apr 2023

- Developed and taught bachelor and master courses in Artificial Intelligence.
- Served as a workshop leader on 'Deep Reinforcement Learning' at the Reinforcement Summer School 2022 hosted by Vrije Universiteit Amsterdam.

PUBLICATIONS

CONFERENCE PUBLICATIONS

[1] Buelent Uendes, Shujian Yu, and Mark Hoogendoorn, "Start Smart: Leveraging Gradients For Enhancing Mask-based XAI Methods", in *The Thirteenth International Conference on Learning Representations (ICLR)*, Apr 2025.

JOURNALS

[1] Buelent Uendes, Alex Antonides, Sjors van de Ven, Denise Johanna van der Mee, Eco de Geus, and A.Mark Hoogendoorn, "Electrocardiogram-Based Mental Stress Detection Amid Everyday Activities Using Machine Learning: Model Development and Validation Study", *Journal of Medical Internet Research*, Mar 2026.

[2] Buelent Uendes Carlos Laborda, and Mark Hoogendoorn, "Beyond Supervision: Evaluating contrastive self-supervised learning techniques for ECG-based mental stress detection", *Under review: Biomedical Signal Processing and Control*.

AWARDS & SCHOLARSHIPS

- Scholarship holder of the German National Academic Foundation — 2013 – 2021
- Study Abroad Scholarship by the German Academic Exchange Service (DAAD) — 2019 – 2020
- Dean's List, Fall 2013 through Spring 2017, University of Hohenheim — 2013 – 2017

SKILLS

- **ML:** Time series analysis, explainability (XAI), self-supervised learning, physiological signal processing
- **Programming:** Python (PyTorch, scikit-learn, NumPy)
- **Tools:** Git, GitHub Actions, Bash, Slurm, Docker
- **Languages:** German (native), English (C2), Dutch (B2), French (A2)

INTERESTS

Beach volleyball, Table tennis, Guitar, Traveling.