

# Céline Budding

Homepage | [Google Scholar](#) | [LinkedIn](#)

Location: Rotterdam, The Netherlands

Email: [c.e.budding@tue.nl](mailto:c.e.budding@tue.nl)

## PHD CANDIDATE PHILOSOPHY OF AI

---

I am a third-year PhD candidate in Philosophy of AI. In my project, I investigate what large language models like ChatGPT "know" about language. Specifically, I take inspiration from philosophical debates in AI in the 80s and 90s and argue that large language models can be considered to have tacit knowledge of language.

More generally, I am interested in what AI systems learn from the data, how we can evaluate and explain their performance, and how we can translate insights from various academic fields—machine learning, cognitive science, and philosophy—to effective regulation and policy for AI.

## EXPERIENCE

---

### PhD Candidate

*Philosophy & Ethics group, Eindhoven University of Technology*

Eindhoven, The Netherlands

*Aug 2021 - current*

- Project: What do large language models know? Tacit knowledge as a potential causal-explanatory structure, supervised by dr. C.A. Zednik and prof. dr. V.C. Müller.

## EDUCATION

---

### Master of Science in Computational Neuroscience

*Bernstein Center for Computational Neuroscience Berlin*

Berlin, Germany

*Oct 2018 - May 2021*

- Thesis: Evaluating interpretability methods on structural brain MRI data with synthetic lesions, supervised by dr.rer.nat. S. Haufe and prof.dr. K. Ritter.

### Bachelor of Science in Liberal Arts & Sciences

*University College Roosevelt/Utrecht University*

Middelburg, The Netherlands

*Sep 2015 - June 2018*

- Thesis: Classification of MRI scans from the ADNI database using voxel-based morphometry, principal component analysis, and support vector machine, supervised by dr. R. van den Doel and dr. G. Andringa.

## TEACHING EXPERIENCE

---

### Philosophy and ethics of AI

*Responsible teachers: dr. C.A. Zednik and dr. E. O'Neill*

Eindhoven University of Technology

- Q2 2023-2024. Teaching assistant. Taught two lectures (connectionist AI, transparency), graded assignment and exam, answering questions.
- Q2 2022-2023. Teaching assistant, partially responsible for grading intermediate assignment and exam, as well as for answering questions.

### USE-BASE

*Responsible teacher: dr. A. Spahn*

Eindhoven University of Technology

- Q4 2021-2022. Teaching assistant, introductory ethics course for 1st year bachelor students. Responsible for leading the tutorials and grading the assignment for one tutorial group (35 students).

## CONFERENCE & WORKSHOP PRESENTATIONS

---

- Assessing the performance of LLMs: the problem of emergent abilities. Poster presentation at the 1st Workshop on Standardizing Tasks, meAsures and NLP Datasets. Jan 29, 2024, Paris, France.
- What do large language models know? Tacit knowledge as a potential causal-explanatory structure. Presentation at PhAI 2023, Dec 15-15, 2023, Erlangen, Germany.
- Toward Cognitive Models in Explainable AI: Mechanistic Interpretability as a Missing Link?. Presentation together with dr. C.A. Zednik at the Biannual Conference of the European Society for Philosophy of Science. September 20-23 2023, Belgrade, Serbia.
- Tacit knowledge and how-explanations for large language models. Presentation at the 49th meeting of the Society for Philosophy of Psychology. June 20-23 2023, Pittsburgh, US.

## ACADEMIC ACTIVITIES

---

### **Participant Summer School Science Communication**

*Leiden University*

*July 3-7 2023*

- I participated in a one-week summer school on science communication, organized by the Science Communication & Society group at Leiden University. In addition to attending lectures about science communication, we developed a prototype for a magazine about visual science communication.

### **Board member WISE network**

*Eindhoven University of Technology*

*May 2023-current*

- I am the PhD representative for our department (Industrial Engineering & Innovation Sciences) in the WISE (Women in Science and Engineering) board.

### **Organizer workshop on the Philosophy of Large Language Models**

*Hybrid/Eindhoven University of Technology*

*Eindhoven, The Netherlands*

*Jan 26 + 27 2023*

- Together with Guido Löhr, I organized a two-day international workshop, with speakers (both invited and contributed) on the topics of communicating with chatbots and explaining large language models.

### **Representative PhD Council**

*4TU.Ethics Graduate School*

*Jan-Dec 2022*

- As a representative in the 4TU.Ethics PhD council, I was responsible for communication between 4TU.Ethics and affiliated PhDs, organizing social events and a writing retreat, and attending the 4TU.Ethics management team meetings.

## NON-ACADEMIC ACTIVITIES

---

### **Committee member 'AI & big data'**

*Stichting Koninklijk Nederlands Normalisatie Instituut (NEN)*

*March 2023-current*

- As a committee member of the working group on AI & big data at the Dutch standardization agency (NEN), I am involved in discussions surrounding standardization of AI and NLP in the Netherlands.
- In addition, I participate in Joint Working Group 5 (ISO and CEN/CENELEC), working on standards for evaluating the performance of NLP methods.

### **Studentdocent/Student Teacher**

*Stichting Oud Geleerd Jong Gedaan*

*Jan 2021 - current*

- I developed a low-threshold and interactive lecture series (4 lectures of 1 hour) and various stand-alone lectures (1 hour each) about different topics in Artificial Intelligence, ranging from self-driving cars to ChatGPT, for an audience of elderly people. I teach these lectures both in-person and online, with audiences ranging from 5-100+ participants.