Philip Lippmann

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Leveraging the knowledge embedded in data to power intelligent systems.

Education

Delft University of Technology **Feb. 2022 – present**
PhD in Computer Science *Delft, The Netherlands*

- Conducting research to enhance agents based on LLMs, enabling advanced reasoning and planning.
- Developing methods to best utilize the additional context gained from multimodal language models.
- Creating targeted synthetic data methods to improve model reliability, minimizing reliance on manual annotations through robust synthetic data generation.

Delft University of Technology **Sep. 2018 – Jan. 2022**
MSc in Mechanical Engineering *Grade: 7.0* *Delft, The Netherlands*

University of Warwick **Sep. 2015 – Jun. 2018**
BEng in Mechanical Engineering *Grade: 2:1 (Honours)* *Coventry, United Kingdom*

Work Experience

TU Delft Department of Cognitive Robotics **Jun. 2021 – Dec. 2021**
Research Intern *Delft, The Netherlands*

- Designed a gaze tracking-based driver monitoring system with behavior prediction for safer highway merging.

Amazon **Aug. 2020 – Dec. 2020**
Software Development Engineer Intern *Berlin, Germany*

- Led the design and implementation of Amazon Telescope, a React and Python-based internal tool, improving issue tracking efficiency across automation tools and enhancing cross-team collaboration.

MIT/Delft Driverless **Jul. 2019 – Aug. 2020**
Machine Learning Engineer *Delft, The Netherlands*

- Utilized GNNs to define motion planning boundaries based on cone positions, improving track limit detection.
- Placed 3rd at Formula Student Germany, the largest student engineering competition in the world.

WMG **Jun. 2018 – Aug. 2018**
Research Assistant, Multiscale Materials Modelling Group *Coventry, United Kingdom*

- Developed a novel numerical chemo-mechanical model to simulate cycling performance and aging of Si Li-ion batteries.

Publications & Research Activities

Selected Publications

- [NeurIPS 2024 Language Gamification] *Positive Experience Reflection for Agents in Interactive Text Environments*, 2024. **P. Lippmann**, M.T.J. Spaan, J. Yang arXiv:2411.02223
- [Under Review] *Illuminating Blind Spots of Language Models with Targeted Agent-in-the-Loop Synthetic Data*, 2024. **P. Lippmann**, M.T.J. Spaan, J. Yang arXiv:2403.17860
- [COLING 2025 (Oral)] *Context-Informed Machine Translation of Manga using Multimodal Large Language Models*, 2024. **P. Lippmann**, K. Skublicki, J. Tanner, S. Ishiwatari, J. Yang arXiv:2411.02589

Full list: Google Scholar

Awards

- Google Cloud Research Grants (2024)
- Oracle Cloud Research Grant Award ($50000, 2023)
- Warwick Undergraduate Research Scholarship (£2500, 2018)

Reviewing

- COLING 2022; SIGIR 2023; HCOMP 2023; EMNLP 2023; AAAI 2024; WWW 2025

Technical Skills

Coding: Python, PyTorch, JAX, React, LaTeX | **Cloud & Tools**: Git, GCP, Weights & Biases