

# Konstantinos Zafeirakis

## Curriculum Vitae

### Faculty of Science

University of Amsterdam  
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Google Scholar: [Link](#)

LinkedIn: [Link](#)

## Research Interests

Reliable and Trustworthy Machine Learning, Data-Centric and Systems-Aware ML, Efficient Inference and Model Serving, Privacy & Security in Neural Networks, Information Retrieval, Natural Language Processing, Signal Processing

## Education

**University of Amsterdam**, Amsterdam, The Netherlands

2024 – 2026

*MSc in Artificial Intelligence*

GPA: 8.15/10 (A equivalent, per Nuffic/UvA conversion guidelines)

**Technical University of Crete**, Chania, Greece

2019 – 2024

*Diploma in Electrical and Computer Engineering*

GPA: 8.81/10 | Rank: 1st in cohort upon admission

Thesis: "Hallucination Detection in Image Inpainting"

Supervisor: Dr. Grigorios Tsagkatakis

## Research Experience

**Elsevier B.V. & IRlab UvA**, Amsterdam, The Netherlands

June 2025 – Present

Machine Learning Researcher - Supervisor: Evangelos Kanoulas

- Conducted an in-depth literature review on advanced machine unlearning techniques, focusing on post-training data erasure, model compliance, and privacy-preserving ML systems.
- Analyzed methods including certified removal, influence functions, and distillation-based unlearning for dynamic model adaptation without full retraining.
- Ran experiments across multiple models and data partitions; investigated prompting strategies to optimize unlearning performance.

**Jobly.ai.(pre launch)**, Los Angeles, CA, USA

Apr 2025 – Present

Co-founder, [link](#)

- Co-founded an AI-powered platform for matching candidates with opportunities using NLP-based resume parsing and transformer models.
- Fine-tuned a cross-encoder (MS-MARCO MiniLM) on user feedback to improve future match quality for candidates.
- Built a robust end-to-end matching pipeline including preprocessing, model training, scoring and ranking.

- Applied TensorFlow and PyTorch for computer vision challenges: ViT training, fine-tuned image classifiers, CAMs, and data preprocessing.
- Conducted advanced image processing research for hallucination detection in image inpainting.
- Designed and implemented an innovative architecture to identify and quantify hallucinations in remote sensing image inpainting, providing a novel means to precisely evaluate model performance and reliability.
- Presented findings at the [AstroML Journal Club](#), contributing to actionable insights for journal submissions.

## Teaching

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**University of Amsterdam**, Amsterdam, The Netherlands

**Fall 2025**

*Teaching Assistant*

- 52041COV6Y, Computer Vision 1. Graduate Teaching Assistant.  
Course Coordinators: Martin R. Oswald, Dimitrios Tzionas.

## Publications

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### In Preparation

Zafeirakis, K., & Tsagkatakis, G. (2025).

A Framework for Detecting and Quantifying Hallucinations in Remote Sensing Image Inpainting.

*IEEE Transactions on Geoscience & Remote Sensing*. [Link](#)

### Journal Articles (peer-reviewed)

van Erven, O., Zafeirakis, K., Smit, J., Smidi, J., & Buijs, L. (2025).

[Re] Cooperate or Collapse: Emergence of Sustainable Cooperation in a Society of LLM Agents.

*Transactions on Machine Learning Research (TMLR)*. Reproducibility Certification. [Link](#)

## Leadership & Student Activities

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**VIA - Amsterdam Information Sciences Association**, Amsterdam

**Sep 2025 – Present**

The Netherlands

*Member*

**IEEE-TUC Student Branch**, Chania, Greece

**Nov. 2019 – Aug. 2024**

*Member*

- Developed a machine learning-based anomaly detection system for post-flight rocket telemetry data, identifying 2 critical anomalies.
- Mentored 10+ new members on multiple projects, improving team performance.
- Led a workshop on “Introduction to Deep Learning with TensorFlow” for 30+ members, boosting student proposals in deep learning by 20

## Technical Skills

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**Programming:** Python (NumPy, Pandas), Java, C++, C, MATLAB, SQL

**Machine Learning / AI:** Deep Learning: PyTorch, TensorFlow, Keras; Classical ML: Scikit-learn; NLP: Transformers, HuggingFace; Computer Vision: CNNs, ViTs, Image Processing;

**Data Analysis & Visualization:** Matplotlib, Seaborn, Pandas, NumPy

**Tools & Platforms:** Git, MLflow, W&B, Docker, AWS, Azure, Linux

**Signal / Image Processing:** Fourier / Wavelet Analysis, Filtering, Computer Vision Pipelines