NIKOLAOS FRAGKOS

Data Science for Food & Health

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Profile

Data scientist passionate about applying Artificial Intelligence and data-driven innovation to food and nutrition systems. Combining a background in Agricultural Economics with advanced training in Data Science for Food and Health at Wageningen University, I specialize in machine learning, data engineering and AI applications for food fraud detection and sustainability. Experienced in collaborating across R&D and digital teams to translate complex datasets into actionable insights.

Education

09/2023 – 09/2025   **MSc in Data Science for Food and Health**
Wageningen University & Research (WUR), Wageningen, Netherlands

Grade: 8.35/10
Thesis: Artificial Intelligence and citizen science to combat Food Fraud (9.5/10).
Coursework: Programming in Python; Data Science Concepts; Statistics for DS; AI for Food & Health; DS for Food & Consumer Behavior; Food Fraud & Mitigation.

09/2017 – 09/2022   **Integrated MSc in Agricultural Economics & Rural Development**
Agricultural University of Athens (AUA), Athens, Greece

Grade: 8.56/10 (top 5%, 3rd/128).
Thesis: Sentiment Analysis of Review Websites: A Case Study in the Greek Food and Beverage Industry (10/10).

Professional Experience

08/2025 – Present   **Student Assistant — Data Engineering for AI Crop Modeling**
Artificial Intelligence Group, WUR, Wageningen, Netherlands

Integrated heterogeneous agricultural datasets into AI-ready data pipelines; improved data quality and interoperability for predictive crop models supporting sustainable agriculture.

03/2025 – 08/2025   **Culinary Data Analyst Intern**
Kraft Heinz, Nijmegen, Netherlands

Developed data-driven trend analysis model using Python and Tableau; collaborated with R&D teams to integrate analytics into innovation decisions; contributed to digital-transformation initiatives for product-insight workflows.

11/2021 – 09/2023   **Research Assistant**
Informatics Lab, AUA, Athens, Greece

Collected/managed metadata on digital-competency resources; developed methodology & extraction guide; presented outcomes.

07/2021 – 09/2021   **Barley Operations Assistant Intern**
Athenian Brewery, Athens, Greece

Statistical analysis for barley yield; regional yield maps.

07/2020 – 09/2020   **Subsidies' Archive Assistant**
Chios Mastic Growers Association, Chios, Greece

Database management; invoice checks; producer support on subsidy status.

Teaching Experience

11/2024 – 03/2025 **Teaching Assistant — Food Fraud**
Wageningen University & Research, Netherlands

Co-developed AI interview chatbots (prompt engineering, course alignment); designed learning resources linking AI and food-fraud detection.

01/2025 – 02/2025 **Teaching Assistant — Artificial Intelligence**
Wageningen University & Research, Netherlands

Assisted labs; designed/refined assignments; graded with feedback.

09/2024 – 11/2024 **Teaching Assistant — Programming in Python**
Wageningen University & Research, Netherlands

One-to-one lab support; code troubleshooting.

Publications

2025 **The Role of AI in Combating Food Fraud: A Systematic Literature Review**
Fragkos N., Bouzembrak Y. & Erasmus S.
Critical Reviews in Food Science and Food Safety, (Under Review)

RGB Image-Based Origin Authentication of Bananas with Convolutional Neural Networks and Citizen Science Data
Fragkos N., Bouzembrak Y., Erasmus S. & Soares.F
Food Control, (Under Review)

2024 **A Sentiment Analysis Approach for Exploring Customer Reviews of Online Food Delivery Services: A Greek Case**
Fragkos N., Liapakis A., Ntaliani M., Ntalianis F. & Costopoulou C.
Digital, 4(3), 698–709. doi:10.3390/digital4030035

2022 **Sentiment Analysis in Online Food Delivery: A Greek Case Study**
Fragkos N., Liapakis A., Costopoulou C. & Ntaliani M.
In *Proc. HAICTA 2022*

Honors & Awards

2023 **3rd Place — Data Factory XR Hackathon**, *Wageningen University & Research (WUR)*

2023 **MSc Scholarship** — *John S. Latsis Foundation*; *20 scholarships nationwide*

2021 **Top 7 Ideas — InnovinAgri**, *Agricultural University of Athens*

2020 **Top 10 Ideas — TROPHY Challenge**, *New Agriculture New Generation*

Skills

Programming & Analytics Tools
Python (pandas, scikit-learn, TensorFlow, Keras), R, SQL, Tableau, Git, Stata, SPSS

Machine Learning & AI
Machine Learning, Deep Learning, Data Engineering, Model Evaluation, Feature Engineering, Data Visualization

Data Science & Research Methods
Statistical Modelling, Reproducible Research, Experimental Design, Data Cleaning, ETL Pipelines

Domain Expertise in Food & Agri-Tech
AI for Food Systems, Food Fraud Detection, Citizen Science, Precision Agriculture

Collaboration & Communication
Prompt Engineering, Cross-Functional Collaboration, Technical Writing, Research Communication

Languages

Greek	**Native**
English	**C2** — TOEFL iBT (2024), ECPE (2014)
French	**C1** — Sorbonne C1 (2013)
Spanish	**A2** — Wageningen in'to Languages Certificate (2024)
Dutch	**A1** — Currently Learning (2025)

Summer Schools

Precision Agriculture — University of Ghent (2024)
Behavioral Economics — Agricultural University of Athens (2021)

Volunteering

2019 – Present	**Organizing Committee Member**
	PANORAMA of Entrepreneurship & Career Development, Athens, Greece
	Event coordination, on-site logistics, outreach.

Additional Information

2022–2023	**Military Service**
	Hellenic Navy, Greece
	Fulfilled (compulsory national service)