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; 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 findings.

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*

Skills

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

Machine Learning & AI
- Machine Learning
- Deep Learning
- Data Engineering
- Model Evaluation
- Data Visualization
- Prompt Engineering

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
- Precision Agriculture

Collaboration & Communication
- Cross-Functional Collaboration
- Technical Writing
- Research Communication

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*

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

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)