

# NIKOLAOS FRAGKOS

Data Science for Food & Health

fragosnick@gmail.com • +30 6949938937 • Wageningen, Netherlands

linkedin.com/in/fragkos-nikolaos • nikolaosfragkos.github.io

## 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, product innovation, 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:** Opinion Mining in evaluation sites, Greek Food & 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 models for New Product Development 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, 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	<b>Native</b>
English	<b>C2</b> — TOEFL iBT (2024), ECPE (2014)
French	<b>C1</b> — Sorbonne C1 (2013)
Spanish	<b>A2</b> — Wageningen in'to Languages Certificate (2024)
Dutch	<b>A1</b> — Currently Learning (2025)

## Summer Schools

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

## Volunteering

2019 – Present	<b>Organizing Committee Member</b> <i>PANORAMA of Entrepreneurship &amp; Career Development, Athens, Greece</i> Event coordination, on-site logistics, outreach.
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## Additional Information

2022–2023	<b>Military Service</b> <i>Hellenic Navy, Greece</i> Fulfilled (compulsory national service)
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