

# Sotirios Stamnas

+447 432 279 906 | [svtiris@gmail.com](mailto:svtiris@gmail.com)

## EDUCATION

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- PhD in Mathematics of real-world systems** | *University of Warwick* September 2023 - Present
- Research: DeepFake detection using anomaly detection techniques, supervised by Prof. *Victor Sanchez*
- MSc in Mathematics of real-world systems** | *University of Warwick* September 2022 - September 2023
- Graduated with distinction
  - Research: Fairness in Multi-Objective Reinforcement Learning, supervised by Prof. *Paolo Turrini* and *Ann Nowe*
- Master of Physics** | *The University of Manchester* September 2018 - June 2022
- Graduated with first-class honors
  - Master's project: Applications of Statistical Physics to Epidemiology, supervised by Professor *Tobias Galla*
- Summer Computational Physics Course** | *Aristotle University of Thessaloniki* June - September 2020
- Research: Simulating the wealth distribution in societies, supervised by Prof. *Panos Argyrakis*

## EXPERIENCE

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- Graduate Teaching Assistant** | *University of Warwick* September 2023 - Present
- Taught modules: IB207-12 Mathematical Programming II

## PROJECTS

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- Drift and Bias in AI Tools for GP Consultations** | *In collaboration with Spectra Analytics* January - June 2023
- Investigated how model drift and bias can arise in AI tools used to prioritize online GP consultations
  - Developed a mathematical model, that simulates the environment that such tools operate in and used it to infer bias and drift
  - Proposed ways of reducing bias across different sensitive groups which were motivated by the results
  - Simulated model drift and implemented different refitting strategies in order to mitigate performance deterioration
- Elemental Fantasy V** | *GreatUniHack.com* November 2020
- Awarded 2<sup>nd</sup> place in the Gamedev challenge
  - Collaborated in a team of four people, under a strict deadline of 24 hours and developed a game using Object Oriented Programming and the Pygames library
  - None of the team members had any prior experience with game developing
- Fuzzy run Challenge** | *GreatUniHack.com* November 2020
- Won 1<sup>st</sup> place in the AI sponsor challenge organised by fuzzylabs.ai
  - Analysed complex data in Python, to determine the winner of a three man race
  - Gained experience with principal component analysis and the scikit-learn library

## NON-ACADEMIC ACTIVITIES

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- Secretary of the Student Staff Liaison Committee** | *University of Warwick* September 2022 - Present
- Gathered feedback and ideas from the student cohort, in order to improve student experience
  - Collaborated with the department to design and promote departmental initiatives including module choices, events, reading groups and many more
- Brazilian Jiu-Jitsu Athlete** 2022 - Present
- Member of the Warwick Brazilian Jiu-Jitsu and Judo club
- Rowing Athlete** 2013 - 2022
- First place in the 82<sup>th</sup> Pan-hellenic rowing championship - Junior men's eight

## SKILLS

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- 6 years of programming experience in Python, applied to a variety of research topics such as machine learning. Known libraries include: Pytorch, scikit-learn, Pandas, NumPy, Gym
- 2 years of programming experience in C++. 1 year of programming experience in Julia
- Languages spoken: Greek (native), English (proficient)