Kyriacos Kyriacou

Research Assistant in Early Detection Cancer Research at Keele University
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Recent Projects and Experience

Early Cancer Detection using Machine Learning and X-ray Scattering

Developed models to reliably detect cancer in X-ray scattering of biopsied tissue samples ■ Identified key structural biomarkers of prostate and breast cancer ■ Conducted research on I22 at the Diamond Light Source ■ Drafting a manuscript on machine learning classification of prostate cancer diagnosis and ISUP grade ■ Delivered talks and presentations on my work, including at an Institute of Physics seminar and a Cancer Research UK funded Tissue Microenvironment and Disease workshop.

Developer of `signalearn` github.com/kyri04/signalearn

Developed a Python library to abstract machine learning workflows with signals and sequential datasets ■ Designed to be fully backend-agnostic, supporting any component that follows the standard `scikit-learn` API ■ Future plans for a user-friendly interface to enable use without programming experience.

Wakefulness Detection and Smart Alarm System from Wearable Sensors Personal Project

Trained models to reliably detect wakefulness from Apple Watch sensor signals ■ Currently integrating models into a prototype wearable wristband alarm that only deactivates when the user is awake and out of bed.

Ultrasonic Measurement of Taste Attributes in Fruit Third Year Project

Designed and built a system for rapid ultrasonic scanning of fruit samples ■ Trained regressors to predict penetrometer (crispiness), Brix (sweetness) and titratable acidity (soureness) from ultrasonic features of various fruit ■ Demonstrated improvements over traditional industrial methods which are slow, destructive, expensive, and subjective.

Exoplanet Habitability Prediction from Simulated Transmission Spectra Module Project

Synthesised thousands of exoplanet transmission spectra to compensate for the lack of real observations, with a diverse range of atmospheric compositions, cloud/haze treatments and surface temperatures ■ Trained regression models on the simulations to predict habitability indices ■ Models generalise well to real exoplanet spectra.

Education

2022 - 2025 BSc in Physics at **Keele University** (2:1)
2020 - 2022 A-levels at **St John Fisher Catholic College Trinity Sixth Form** (A*ABBC)

Awards and Scholarships

Tissue Microenvironment and Disease Workshop Presentation Prize Winner July 2025

Awarded £100 second prize for oral presentation at CRUK funded Tissue Microenvironment and Disease workshop.

Bob Gould Prize Winner July 2025

Awarded the Bob Gould Prize for most outstanding performance in the third year Physics project.

FLOURISH Bursary Winner August 2024

Awarded a competitive £1,200 bursary to complete a 100-hour digital marketing project with Exesios BDD.

Summer Research Bursary Winner May 2024

Awarded a competitive £1,600 bursary for an 8-week summer research project at Keele University.

Skills, Hobbies and Interests

Technical Experience with Python, C#, LaTeX, JavaScript, HTML, CSS, PHP, Rust.
Karate 2nd Dan Black Belt & Instructor · Club Captain in 2024 · Social Media Officer in 2025.
Piano Distinction in Grade 8 · Teaching piano part-time · @kyriskeys.
Photography Photographing for City Bloc, NUBS, Keele Football, Stoke-on-Clay & more · @kyrisphotos.
Social Media Currently employed as webmaster and social media manager for Karate-do-Shotokai (KDS).
Game Dev. Developer of Rocket Smash, experience with Unity and Unreal Engine.