Olek Osikowicz

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Education

PhD **University of Sheffield**, Computer Science — Sheffield, UK — Sept 2023 – present

- **Testing Autonomous Driving Systems (ADS) in simulated environments**
- Applied machine learning to accelerate scenario-based ADS testing
- Developed Multi-Fidelity Bayesian Optimization framework for ADS testing
- Diagnosed and reduced flaky ADS tests caused by simulator nondeterminism
- Mentored summer research students on software testing projects
- Contributed to open-source ADS testing tools

BSc **University of Sheffield**, Computer Science — Sheffield, UK — Sept 2020 – June 2023

- Graduated with First-Class Honours
- Disertation: *Autonomous Driving Systems Testing - grounded in reality test generation*

Publications

Multi-Fidelity Bayesian Optimization for Simulation-Based Autonomous Driving Systems Testing — June 2025

Olek Osikowicz, Phil McMinn, Wei Xing, Donghwan Shin

Manuscript under review at the 2025 IEEE/ACM International Conference on Automated Software Engineering (ASE 2025)

Empirically Evaluating Flaky Tests for Autonomous Driving Systems in Simulated Environments — Apr 2025

Olek Osikowicz, Phil McMinn, Donghwan Shin

eprints.whiterose.ac.uk/222933 *2025 IEEE/ACM International Flaky Tests Workshop (FTW 2025)*

Teaching

Software Re-Engineering — Mar 2024 – present

Supporting undergraduate and master's students in re-engineering real-world Python projects.

Introduction to Algorithms and Data Structures — Feb 2023 – June 2023

Running tutorial sessions for first-year students, explaining the principles of modern algorithms and data structures.

Working Experience

Dover Fueling Solutions, Summer Intern — Kraków, Poland — June 2022 – Sept 2022

- Creating and testing fault-tolerant data pipelines on Microsoft Azure.
- Worked with SQL warehouses and data lakes on the Databricks cloud platform.

Skills

Cloud Computing: Building research computing pipelines with Docker, AWS (EC2, S3), and GCP (Cloud Run)

Programming: Proficient in Python; solid understanding of networking, DevOps, Git, and Linux

Mathematics: Strong foundation in calculus, linear algebra, and statistics

Languages: Polish (native), English (proficient), German (conversational)

Open Source Projects

GOA Maps — May 2024

Map data processing application built in Python from scratch, generating high-quality city map posters.