

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
 - Leveraging machine learning to optimize and accelerate ADS testing
 - Applying multi-fidelity optimization for ADS testing
 - Investigated flaky ADS tests caused by simulator nondeterminism
 - Supervisors: Donghwan Shin & Phil McMinn
- BSc** **University of Sheffield**, Computer Science Sheffield, UK
Sept 2020 – June 2023
- Graduated with First-Class Honours
 - Dissertation: *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:** Native Polish speaker, proficient in English, conversational in German

Side Projects

- GOA Maps** May 2024
Developed a Python-based map data processing application to generate high-quality city map posters from scratch.