JORDAN DOYLE

AI Researcher | Automation & Test Generation | End-to-End Quality Engineering

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INTRODUCTION

AI researcher and automation engineer with a Ph.D. in automated test generation and 5+ years' research and industry experience building end-to-end testing solutions across mobile, web, and enterprise platforms. I design and deploy automated workflows that detect defects early, from model-based test input generation to internationalisation and accessibility validation. I also secured funding for and led an Enterprise Ireland feasibility project for AI test generation. I'm keen to build on my current work at ServiceNow in automation and delivery to strengthen the quality and reliability of ServiceNow's platform workflows.

EDUCATION

Ph.D. in Automated Test Generation

September 2017 – January 2024

University College Dublin

Dublin, Ireland

Designed, implemented, and evaluated an automated model-based test generation approach for Android applications. Using a model, combining static and dynamic analysis, to systematically generate end-to-end UI test inputs, improving exploration of app workflows. Published three peer-reviewed papers at IEEE conferences (QRS, DSA, ICSTW).

Static & Dynamic Analysis | Test Automation (Bash, Appium, Selenium, Docker) | Technical Writing (LaTeX, Python)

Thesis
Automated Model-based Interface Test Generation for Mobile Applications

B.Sc. in Computer Science (2:1)

September 2013 – August 2017

University College Dublin

Dublin, Ireland

Designed and implemented an end-to-end eReceipt delivery system consisting of a backend database and server, application layer protocol, and a mobile frontend application.

Mobile Frontend (iOS) | Server & Protocol (Java) | Backend Database (SQL)

Final Year Project
Green Receipt Manager: An eReceipt management and delivery system

EXPERIENCE

AI Researcher

August 2025 – Present

Internationalisation @ ServiceNow

Dublin, Ireland

Researching and prototyping end-to-end automated testing workflows to detect internationalisation and localisation defects across the ServiceNow platform, covering translated content, UI adaptation, and regional configuration. Developed an LLM-driven multi-agent pipeline that automates the generation of UI regression tests from natural language UAT reports to reduce manual testing. Accepted to ServiceNow NOW AI Proceedings 2026.

Led the onboarding and integration of 3 PhD students into ServiceNow as part of a university-industry research collaboration, mentoring them through their first year and guiding their transition into industry research workflows. Assisted students in preparing research presentations for the ServiceNow CTO and presented my own research alongside them. Co-authored a further two papers accepted into ServiceNow NOW AI Proceedings 2026.

Localisation Testing | AI Orchestration (Claude, Ollama, LangChain) | Workflow Automation (Playwright, Python)

Research Software Engineer

April 2024 – April 2025

Research, Development & Innovation @ Fidelity Investments

Dublin, Ireland

Developed and deployed an automated solution to detect element reflow defects triggered by accessibility features (browser zoom, text scaling), integrated into Fidelity's enterprise CI workflows via existing Selenium Grid and Cucumber pipelines to evaluate effectiveness, usability, and scalability in production.

Accessibility Testing | Workflow Automation (Cucumber, Selenium, Java) | Test Generation (Model-based)

Tutor, TA, & Demonstrator

September 2017 – January 2024

School of Computer Science @ University College Dublin

Dublin, Ireland

Led and coordinated teams of up to 10 demonstrators across modules of ~200 undergrad and master's students, including organising and supervising assignment grading. Recognised as a distinguished TA for 2023-24. Also provided one-on-one support across all Computer Science modules as a Support Centre tutor.

TA Award 23/24 | Software Engineering (Java) | Operating Systems (Bash) | Functional Programming (Scheme)

Test Automation Intern

January 2019 – June 2019

Movidius @ Intel Ireland

Kildare, Ireland

Designed and built an automated CI/CD pipeline running functional and performance tests against pre-release hardware, and established an integration testing workflow for new VPUs and their API development platform.

Build Automation (C, CMake) | CI/CD Pipelines (Git, GitLab, Jenkins

Software Engineering Intern

June 2017 - August 2017

Insight @ University College Dublin

Dublin, Ireland

Improved performance and feature set of an Android application delivering guided recovery exercises for knee and hip replacement patients, with real-time avatar feedback and an automated data collection pipeline for physio research.

Android Development (Java, XML) | Unity Avatar (C#) | Database Management (SQLite)

Software Engineering Intern

June 2016 - August 2016

Bruwind @ Vrije Universiteit Brussels

Brussels, Belgium

Extended a web platform that automated real-time monitoring and reporting of turbine farm stability, with a data collection pipeline supporting design optimisation and lifetime estimation of turbine substructures.

Web (HTML/CSS, JavaScript, PrimeFaces | Backend (Java, JSF, Apache Cassandra

Software Engineering Intern

Summers 2014/2015

Manufacturing @ Intel Ireland

Kildare, Ireland

Built an automated end-to-end prototype sensor platform (Intel Galileo, Arduino) for Intel's silicon manufacturing environment, with a real-time web dashboard to automatically detect and visualise manufacturing faults.

Web (HTML/CSS, JavaScript | Backend (ASP, VBScript, SQL | Hardware (Intell Galileo, Arduino

PUBLICATIONS

- Natural Language to Automated Regression: Towards Transforming Defect Reports to AI Agent Executable Regression Tests. **Doyle, J., Holmes, S., Atanassov, E., Ventresque, A.** ServiceNow NOW AI Proceedings 2026
- PADRAIG: Precise Android Automated Input Generation. **Doyle, J., Laurent, T., Ventresque, A.** 24th IEEE International Conference on Software Quality, Reliability, and Security (QRS) 2024
- Modelling Android applications through static analysis and systematic exploratory testing. **Doyle, J., Laurent, T., Ventresque, A.** 10th IEEE International Conference on Dependable Systems and Their Applications (DSA) 2023
- Improving Mobile User Interface Testing with Model Driven Monkey Search. **Doyle, J., Saber, T., Arcaini, P., Ventresque, A.** 15th IEEE Conference on Software Testing, Verification and Validation Workshops (ICSTW) 2021

SKILLS

Leadership & Coordination | Mentoring & On-boarding | Presentation & Communication

Industry-Academic Collaboration | Project Ownership & Funding Acquisition | Stakeholder Communication

Research & Development | Technical & Scientific Writing | Problem Solving & Innovation