JORDAN DOYLE

Research Software Engineer in Automated Software Testing

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INTRODUCTION

I recently defended my Ph.D. thesis with SFI Lero and the School of Computer Science in University College Dublin. I am currently a Research Software Engineer in the School of Computer Science and Statistics at Trinity College Dublin, where I am also a member of the Complex Software Laboratory, SFI Lero, and I work in collaboration with Fidelity Investments Ireland. I am looking for a new challenge in the area of Software Engineering as well as new and exciting opportunities to expand my knowledge and expertise.

EDUCATION

Ph.D. in Computer Science
University College Dublin

📅 September 2017 – January 2024
● Dublin, Ireland

I designed, implemented, and evaluated an automated model-based approach to generate test inputs for Android mobile applications from a comprehensive model created using both static and dynamic analysis. I also published and presented three research papers at highly regarded conferences.

`Java` `Python` `C` `Bash` `Android` `Appium` `Docker` `LaTeX`

✏️ **Thesis**
Automated Model-based Interface Test Generation for Mobile Applications

B.Sc. in Computer Science (2:1)
University College Dublin

📅 September 2013 – August 2017
● Dublin, Ireland

PUBLICATIONS

📄 **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

EXPERIENCE

Research Software Engineer
Complex Software Laboratory @ Trinity College Dublin

📅 April 2024 – Ongoing
● Dublin, Ireland

I am collaborating with Fidelity Investments Ireland, on automated testing solutions to detect accessibility defects in web applications, and reduce the manual testing required by test engineers. I am assessing the usability of these solutions using the company's existing CI/CD infrastructure and comparing them with existing testing methods.

`Java` `Selenium WebDriver` `Selenium Grid` `Cucumber`

Tutor, TA, & Demonstrator
School of Computer Science @ University College Dublin

📅 September 2017 – January 2024
● Dublin, Ireland

I assisted the teaching of undergraduate and master's level students in Functional Programming, Operating Systems, and Software Engineering. As a Teaching Assistant (TA), I coordinated teams of up to 10 demonstrators for modules of approximately 200 students. I organised and supervised the grading of student assignments, and module practicals. I was recognised as a distinguished TA for the 2023-24 academic year. As a tutor in the Computer Science Support Centre, I provided one-on-one assistance to students struggling with coursework from any module in Computer Science.

`Software Engineering (Java)` `Operating Systems (Bash)` `Functional Programming (Scheme)`

Test Automation Intern
Movidius @ Intel Ireland

📅 January 2019 – June 2019
📍 Kildare, Ireland

I researched integration testing methods for newly developed Vision Processing Units (VPU's) and their accompanying development API platform. This required the development and configuration of a custom CI/CD pipeline that included both functional and performance tests with direct access to in-development VPU's and dependency hardware.

C | CMake | GitLab | CICD | Git

Software Engineering Intern
Insight @ University College Dublin

📅 June 2017 - August 2017
📍 Dublin, Ireland

I extended the features and improved the performance of an Android application. The application was designed to guide recent knee or hip replacement patients through recovery exercises with real time visualisation and feedback using a Unity avatar. The collection of physiotherapy research data for Ph.D. students was also a key part of the project.

Java | Android | C# | Unity | Git

Software Engineering Intern
Bruwind @ Vrije Universiteit Brussels

📅 June 2016 - August 2016
📍 Brussels, Belgium

I extended the functionality and features of a web-based application that monitored, analysed and reported the stability of turbine farms in real time, while also collecting data for targeted design optimisations and life-time estimation of turbine substructures.

HTML | CSS | JavaScript | Java | JSF | PrimeFaces | Apache Cassandra | Python

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Software Engineering Intern
Manufacturing @ Intel Ireland

📅 June 2014/15 - August 2014/15
📍 Kildare, Ireland

I built a prototype sensor platform using an Intel Galileo Gen 2 board and Arduino sensor modules for deployment in Intel's silicon manufacturing environment. The platform collected environmental data for storage in an SQL database and a web application provided real time monitoring and visualisation of the data for the detection of manufacturing faults. I also developed web applications to display, filter, and update data within relational databases.

HTML | CSS | JavaScript | Python | ASP | VBScript | SQL | C | Arduino | SVN | Git

SKILLS

Software Engineering | Object-Orientated Programming | Functional Programming | Procedural Programming

Web Development | Test Automation | Static Analysis | Dynamic Analysis | Team Coordination & Organisation

Leadership | Research & Development | Technical & Scientific Writing | Presentation & Communication