Thomas Kiley

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I am a freelance software engineer with 9 years of industry experience, including 3 years leading small technical teams. I am a strong communicator, with experience of working with stakeholders to design and deliver features in line with a roadmap. I write well-tested code, readable code in C++, Java, C# and Python. I have a 1ˢᵗ class honours degree in Discrete Mathematics from the University of Warwick.

Experience

Freelance Software Engineer

April 2020 - Present

Working as an engineer on short to medium-term contracts . My clients have included:
- Ultromics - Extending and re-engineering a **C# WPF** desktop application using **Entity Framework** using **MVVM** architecture
- Wargaming UK - Developing an automated testing framework in **C++** using **Unreal Engine**
- Diffblue - Leading consultancy team and managing the contract renewal for a large client
- EA - Developing features and fixing bugs in their in-house **C# WPF** desktop game engine editor using **MVVM** architecture.

A full list of clients can be supplied upon request

Diffblue

Oct 2016 - April 2020

- **Leading a cross-functional four-person team working on the core test generation engine.**
- Delivered critical product features in **C++**, (based on the open-source CBMC) and in **Java**.
- Working with stakeholders including the product owner to understand requirements and making sure the engineering tickets solve the real user problem
- Leading technical development of complex engineering tasks, including a modular "smart harness".
- Fixing bugs across the codebase, along with adding automated tests so the bug cannot reappear.
- Tuned our code review process to ensure team members continuously learn from each other without getting bogged down in perfectionism.
- Actively promoting a culture of "if it isn't tested (in CI), it doesn't work".
- Running fortnightly "1-2-1s", setting quarterly goals and providing continuous feedback to team members so they were all able to grow.
- Handling various leadership responsibilities including running agile meetings, onboarding new team members and contributing to company road map planning.

In Mind Games

July 2014 - Oct 2016

- **Sole programmer responsible for developing two games in Unreal Engine 4 in C++.**
- Implemented an ocean simulation based on Gerstner Waves that featured a translucent ocean and a physics-driven buoyancy model.
- Prototyping a game in **C#** using **WinForms.**
- Working independently and remotely.

Born Ready Games

July 2012 - July 2013 (Intercalated Year)

- **Released Strike Suit Zero - http://store.steampowered.com/app/209540**
- Developing features and fixing bugs in **C++** and **Lua** within the context of the (in-house) game engine.

doublesix games

September 2010 - January 2012 (Holiday Employment)

- Created some tools in **C#** for the in house engine including a level editor, a particle system editor and material designer similar to that found in Unreal Engine.

References are available upon request

Education

University of Warwick 2010 - 2014	1st Class Honours BSc in Discrete Mathematics with Intercalated Year *Discrete Mathematics is a joint degree run by the Computer Science and Mathematics departments.*	
Guildford County School 2003-2010	**A-Levels:**	2 A*s (Further Mathematics, Computing), 1 A (Mathematics), 1 B (Physics)
	AS-Levels:	1 A (History)
	GCSEs:	2 A* (Maths and Science), 5 As (including French) and 2 Bs

Projects & Technologies

I have worked on a number of personal projects. These have included games, apps and tools. I've done these both on my own, and as part of a team. I have used a variety of tools and technologies, including **Android, Unity3D,** various **third party APIs** and **Google Cloud.**

You can read about some of the projects I have done at http://www.tkiley.co.uk or on my github profile at github.com/thk123

I set up and helped to run a Code Club in our local library **teaching children Scratch** and **Python**.

I am familiar with a wide range of tools, using them in both professional and hobby settings. I have used **CLion**, **Visual Studio, InteliJ** and other IDEs. I am familiar with several source control solutions, including **Perforce** and **Git**. I have used **JIRA** and **Trello** for project management. I am comfortable in both **Windows** and **Linux** environments. I have used a number of CI systems, in particular, **Travis**.

Other Interests

In my spare time, I organise and campaign for the Green Party. I also frequent StackOverflow (http://stackoverflow.com/users/958004/t-kiley) as I enjoy finding new problems and helping people solve them.
Since the pandemic, I am deeply interested in working with scientists and academics to help combine my knowledge of software engineering with their domain expertise to push human endeavours forward.
I like to go cycling, see live music and play board games with friends.