

# Mark S. Everitt

MPhys (Sussex), PhD (Leeds)

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## About

I'm a software engineer specialising in Node.js and JavaScript in general, as well as a variety of languages and technologies. My interests lie in web based platforms and automation. In practice this means providing users and colleagues with clean APIs with good documentation and high test coverage. Doing so requires bringing together a variety of technologies such as databases (both relational and NoSQL), file systems and communications, thereby providing a coherent whole. I'm at home in an agile development team with short specification to implementation times. My contributions to the open source community may be [found on GitHub](#) and [npm](#).

In a previous life I was a quantum information theorist with close ties to experimentalists. I have provided simulations and analysis of high profile experimental results such as a the recent super conducting qubit - diamond colour centre ensemble hybrid memory system. A selection of publications can be found on [Google Scholar](#).

## Current Position

**Impala**, (remote from Brighton)  
Senior Software Engineer,

**November 2019 to present**

In this role I design, write, and maintain HTTP services (in Node.js) wrapped as docker images. These services collect, parse, and communicate (over HTTP and RabbitMQ) data from a variety of hotel Property Management Systems into a common format for our clients to query. I also write and overhaul Continuous Integration (CI) and Deployment (CD) setups. These setups deploy services and tasks to AWS Elastic Container Service.

## Experience

**ubio**, London (remote from Brighton)  
Senior JavaScript Engineer,

**December 2016 to November 2019**

I was part of a small team of engineers, responsible for a number of components in a platform providing browser automation for commercial contexts. It meant authoring and maintaining applications written in JavaScript (Node.js), containerising them using Docker, and deploying them to Google Cloud Platform using Kubernetes (GKE).

**Brandwatch**, Brighton  
JavaScript Engineer and Build Master,

**May 2014 to December 2016**

I worked for the Vizia team, authoring code both for the browser and the server. Vizia is a dashboard system built with Backbone and Node that connects to the Brandwatch API and other data sources. The team employs kanban, so engineers on the team overlap heavily with each other in skill sets to quickly dispatch tickets as they flow through the board. My specialisation within the team focussed on the Vizia Node services. I was also the build master, responsible for deploying builds to production (hosted on Linux servers, and later Google Container Engine).

**Entrago**, Highgate Studios, London  
Lead Platform Engineer,

**August 2013 to May 2014**

I was the lead engineer for company social media platform. In this role I have performed a major refactoring of the existing framework into a service oriented architecture, whilst adding functionality and improving test coverage. In my time there I added proper error handling, better logging and convinced my colleagues to use a git-flow-like practice and code review.

**Wizcorp**, Chuo-ku, Tokyo, Japan  
Game Platform Developer,

**November 2012 to August 2013**

Game Engineer,

**June 2012 to November 2012**

I worked in a small team developing the in house game platform M-A-G-E. The platform, built on Node, provides a consistent interface between the game level code and the various technologies we relied on to store, manipulate and transport data between servers and game clients.

On this team I implemented, from the ground up, data sampling of workers, OAuth 1.0a signature generation and verification in pure Node, API authoring and implementation for a third party authentication and user, developer and application ecosystem (much like LINE) in Express, and submitted C++ and JavaScript patches to the Couchbase Node wrapper.

**National Institute of Informatics**, Chiyoda-ku, Tokyo, Japan

NICT postdoctoral researcher,

JSPS postdoctoral fellow,

**November 2011 to June 2012**

**November 2009 to November 2011**

The focus of my research was in ultra-high fidelity quantum logic circuits using a single nitrogen vacancy centre in diamond. I also had close ties to NTT Basic Research Laboratories. In my free time I remain involved in simulations of the superconducting quantum circuits made by NTT BRL, and simulations of the hybrid flux qubit with diamond defect memory in development there. This research has so far resulted in a high profile publication in [Nature](#).

In addition to the aforementioned research, I was responsible for organising the QuLink series of seminars in collaboration with the Tokyo University Quantum Information Group.

## Outreach

I was a mentor for Codebar Brighton, the Brighton wing of an organisation that promotes under-represented groups in the software engineering industry by providing free weekly workshops. I was been a mentor for Codebar since it began in Brighton in 2014. I put mentoring on pause in 2018 for a while after I became a dad, but hope to return to it soon.

## Technical Skills

**Expertise:** Node.js and JavaScript in general, various module systems. Databases such as MySQL, PostgreSQL, Couchbase/Memcached, Redis and SQLite. Testing with Mocha and Sinon amongst other libraries. Nginx as a reverse proxy and to host assets. On the client side, HTML and CSS, emerging browser APIs. Docker and kubernetes for deployment.

**A little rusty:** C, C++, Fortran, Python, Matlab/Octave and a little Lua.

**Learning:** Rust and Go. Having fun with GitHub actions.

**Project Management:** I worked in scrum and kanban teams both backed by software (JIRA etc.) and physical boards.

## Education

**University of Leeds**, Leeds, West Yorkshire, UK

Graduate Student (PhD moved with supervisor)

**October 2006 to September 2009**

- Experimental work on the one atom maser (the micromaser), during the build phase. Experience with cryogenics, microwave engineering, mechanical and electrical engineering, vacuum engineering and computer control for automating experiments.
- Theoretical work on an atom-cavity system for universal quantum logic with the field as a register with Dr Barry Garraway.
- Theoretical work on the micromaser as a candidate for continuous variable quantum computation with Dr Viv Kendon and her graduate students.

**University of Sussex**, Brighton, East Sussex, UK

MPhys, Theoretical Physics 1st Class (Hons).

**Graduation Date: July 2005**

- Thesis Topic: Multimode Quantum Optical Logic
- Advisor: Dr Barry M. Garraway
- Winner of Best MPhys Project 2005.