# Stephen Nutbrown

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## Personal Statement

I'm currently employed at Capital One as a software engineer; manager level associate. As the technical lead within my team, I'm responsible for making technical decisions at team level, and mentoring new and existing engineers. As part of the SDE4 role outside of my team, I'm responsible for understanding requirements, planning, architecting and presenting upcoming work across the wider tribe (upwards of 10 teams). I'm comfortable with the intricate details of writing software, and do thoroughly enjoy completing coding tasks within my team, however, as a certified AWS Solutions Architect Professional, I'm just as happy designing and documenting architectures for the cloud. Over recent years at Capital One, my focus has slightly shifted away from writing code, in a direction towards mentoring, planning, architecting and being involved in recruitment, as well as being called on to resolve blockers or production issues.

I pride myself on having a well-rounded view of business, as well as software engineering. This comes from my varied background, which has involved me studying management, being a quality assurance lead, software engineer, building a start-up, winning a hackathon, representing the UK in a global competition and conducting research for a top UK university, as well as my side projects that are detailed below.

The reason for my achievements so far is simple; I love what I do and so it doesn't feel like hard work. I'm at my happiest when I can see the positive impact of my team's effort on customers and end-users, and this is what I'm keen to look for in any new role.

In my personal life, I'm a father to a young boy and a husband to my wife, who is also a software engineer. I thoroughly enjoy playing poker, gaming, short walks around Wollaton Park and taking vacations in Orlando.

## Education, Academia and Certifications

### Certifications:


2019 2018 2017 2016 2012

I am currently working towards the AWS Certified Security – Specialty certification.
**University Degree -** First class, BSc Computer Science and Management (GN42) – University of Nottingham. Graduated 2012 and achieved the best individual dissertation award.

## Work Experience

**Manager Associate; Senior Software Engineer (SDE4) (Jan 2020 – present), for Capital One, Nottingham.** My role is focused around the early refinement of product intent into architectural designs that involve work spanning across teams, whilst still maintaining a position within an individual delivery. I actively participate in mentoring, recruitment, PoCs, tooling and technology choices. My current focus is on adding functionality to the Capital One mobile application by working with a team to create several internal facing APIs. This involves working across mobile teams, servicing teams and core internal APIs, as well as with product owners to ensure the technical solutions meet the business intent.

**Principal Associate; Software Engineer (SDE3) (Jan 2018 – Jan 2020), for Capital One, Nottingham.**. During this time I onboarded an offshore team in Bangalore, India, and attended AWS Re:Invent in Las Vegas. This role was less about coding, but I still found the time to debug problems and complete a few stories each sprint when needed. During this period, I was one of the main contributors to the design and delivery of Capital One's Open Banking APIs. I'm still one of the open banking registered technical contacts, and on call for support of these APIs. Reason for leaving: Promotion

**Senior Associate; Software Engineer (SDE2), (Dec 2016 – Jan 2018), for Capital One, Nottingham.** In this role I worked in a team deploying APIs (both public and internal facing) onto AWS, using Java, Spring Boot, Hibernate and Jenkins. Further to the applications themselves, I worked on infrastructure as code, auto-scaling, security concerns and deployment pipelines. The main project I worked on during this time was an externally facing API, called quotation, which provides quotes to third party aggregators (E.g, The API that facilitates Capital One showing up on websites such as Compare the Market). Reason for leaving: Promotion

**Software Engineer, Java (May 2016 – Dec 2016) for MHR, Nottingham.**
At MHR I was a Java Software Engineer. Here I gained experience in agile methodologies, Java EE, and working with Wildfly, Hibernate, Jackson and using tools such as Swagger and Jenkins. Reason for leaving: Looking for a new challenge and improved work environment

### Research, School of Computer Science at Nottingham University (2012-2015).
I developed a marking system for assessing Java coursework solutions and providing real-time feedback. The system was named "The Marker's Apprentice" and was used for the assessment of over 9,000 submissions. For the cohorts using the system, a measurable improvement was recognised and as part of this work I achieved a commendable teaching award in 2015. Several parts of it are described in published in academic papers, e.g here (Static analysis of programming exercises: Fairness, usefulness and a method for application).

**Lead Quality Assurance (2010-2011) for hoverState(), California**
I led a team of 5 software quality engineers to ensure projects met the standards required. Working with teams from UK, China and USA. Reference available on request. Reason for leaving: To concentrate in my final year on my degree.

**Quality Assurance Engineer (2009-2009) for hoverState(), California**
Worked as quality assurance engineer, for projects based on Android, iOS, emails and web development, before being moved to a lead role. Reference available on request. Reason for leaving: Promotion.

## My side projects and notable achievements

**Nutbrown.io: Personal blog – available at** https://nutbrown.io. A static website hosted using Cloudfront and S3, built using codepipeline for each push to GitHub.

**QR Clean (Current side project)**

This is a very quickly thrown together project using AWS Amplify, in response to coronavirus. The premise is that QR codes can be used to replace the handwritten signs that detail cleaning schedules, found in many public washrooms and toilets. Cleaners can scan the QR codes which direct them to deep links to the website, where they can record cleaning sessions. This allows management teams to see an overview of their premises and when each location was last cleaned. It also provides some reassurance to visitors who may scan the QR codes to view a cleaning history or report any problems. The main project is fully serverless, made up of a single page app using React, several DynamoDB tables and some Javascript lambda functions behind AWS API Gateway. Sign up and sign in functionality is provided by AWS Cognito. The QR codes are about to start appearing in a few restaurants in Nottingham as a trial. The project is part of a newly registered business that is owned by a non-technical friend, who will be taking it forwards after the trial and MVP.

**Social Wage and PromoteMyBrand (2016-2020) –** I developed a web application for connecting companies to social media influencers. The website was developed for a start-up, called "PromoteMybrand". Shortly after the site development, the company received substantial investment. It ran on a Jetty server, using Hibernate and Apache Tapestry 5 and connected to various social media platforms for verifying accounts and creating automated posts on behalf of advertisers. The company was managed by two owners and several investors, with myself as a founding shareholder. It grew to having tens of thousands of registered users, an office in town, and over 20 employees, without any technical issues. Unfortunately, after members of the sales team recorded unrealistic expectations for future growth, the company struggled and went into administration in 2020.

**Trumpbot – "Don't believe what you read" Winning Hack24 entry (2017)** – This was a humorous twitter bot, created within 24 hours and hosted on EC2s. It compared a live feed of twitter posts against a database of 'fake news' articles scraped from snopes.com. If the twitter post was deemed to be semantically related to a fake news article, a bot account would reply to the message calling it out, with a (probably marginally insulting) quote from the 'what does trump think' API. The winning submission video can be found here.

**Wedding web application (2016)** – My wife and I wrote a website to manage RSVP's, a gift registry (Tracking payments with PayPal), invitations, food preferences and music tastes. The website ran on AWS and used Tapestry5 and Hibernate (Java) as the backend. This project shows my love for technology and before it went live on Amazon's servers, it was running happily on a Raspberry Pi.

**Oxford University Press handwriting (2015) –** I developed a typing system for creating handwriting practise printouts for children. The system is fully cursive (joint letters), which means there are many possible different glyphs for each letter for the different types of joins. I worked on a set of VBA macros for calculating the correct character to use from the font when typing, to allow connections to the previous and following character. This is used at many schools throughout the UK. A full description is available here.

**Trollbox (2013)** – Trollbox was an Android app for tracking the price of cryptocurrencies and provided a live chat feature. It connected to several BTC-e (Cryptocurrency exchange) APIs, which have now been shut down, and so has been removed from the play store.

**Spindroid (2012)** – A fruit machine for Android with over 8,000 downloads and a 4-star rating. This was my dissertation which I thoroughly enjoyed. However, I haven't had the free time to maintain it and never monetized the project, and so I have since removed from the store.

**UK Microsoft Excel Champion, 2006 -** At the age of 16, I held the title of UK Microsoft Excel champion from Microsoft and Certiport, which lead to a trip to America to compete to become the world champion. Newspaper articles are available on request. More information can be found here.

## Relevant technologies I have experience with

Amazon Web Services. I'm particularly interested in infrastructure as code, specifically Cloudformation.

Java and associated tools/frameworks (Spring boot, JAX-RS, Hibernate, JPA, Cucumber, JUnit, AssertJ, Mockito, Gradle, Maven, IntelliJ).

Build pipelines, particularly Jenkins.
Infrastructure, including automation with Chef, monitoring & logging (e.g Cloudwatch/AppDynamics), caring about resiliency and performance.

It's very difficult to list every technology that I've used, and I push myself to be constantly learning. If you have questions about any specific tools or frameworks, please feel free to reach out: stephen@nutbrown.io