# Antonio Fiumano

#### tl;dr

I love programming, scalability, challenge and learning. I’ve mastered C# and C++, I’m really good at Python and Javascript and I’m fluent in many more languages like C and PHP. I am flexible with the toolset used if it’s the right one for the job and I’m totally open to learning new technologies. I have key experience in distributed computing, natural language processing, ecommerce and cloud architectures. Fast pace environments don’t scare me. I like to deliver.

#### Me

Hi, my name is Antonio, I was born in Italy in 1985, I’m a **developer** in a wide variety of applications but my *current* focus is on web applications and services because designing and building scalable, distributed applications on the cloud is challenging and challenge is *fun!*

Although I have **13 years of professional experience**, I have never worked a single day of my life. I *love* programming, I’ve been doing it since I was 9 years old, it’s my passion and my stress relief, my obsession and my hobby.

## Professional Experience

#### Equal Experts | May 2016 - Present | London, United Kingdom

We enabled customers to make quick and accurate commercial decisions for the pharmaceutical industry by providing modern web API and single page apps using the **AWS** infrastructure. Working in a serverless environment, including technologies like **Lambda**, **Kinesis**, **SNS**, **SQS**, **S3**, **Api Gateway**, **ElasticSearch**, we used both **NodeJS** and **dotnet core** for the backend while **ReactJS** powered the frontend.

#### Mailcloud | May 2015 - March 2016 | London, United Kingdom

I’ve developed applications on the **Microsoft Azure** stack, using **Service Fabric**, **Orleans**, **Cloud Services**, **Storage Services** (Tables, Queues, Blobs), **Service Bus**… I’ve implemented core algorithms for data sharding, conflict free replicated data types (**CRDT**), load balancing and data streaming with strong eventual consistency.

#### 1E | January 2014 - December 2014 | London, United Kingdom

I’ve worked on a cloud based virtual machine delivery solution for implementing “Bring Your Own Device” policies. I’ve been developing on the **Azure** backend using **C#** and the virtualization engine in **C++** for low level or high performance functionalities (encryption, drivers, compression, etc…).

#### JustGiving | January 2013 - December 2013 | London, United Kingdom

Worked on the new mobile focused donation process using **AngularJS** and **C#** and the new universal search on **ElasticSearch**. My work improved the conversion rate and the performance of the website by a considerable amount. I spent the rest of my time teaching people new skills and improving the development/release cycle of the platform.

#### DocFlow | April 2012 - January 2013 | Milan, Italy

My job was to introduce agile methodologies, coordinate two teams of developers, refactoring & redesigning the internal web platform, architect and lead developer of a strategically important project of the company. I was working both on the backend (**C#**) and the frontend (**HTML5**, **CSS**, **JavaScript**, **KnockoutJs**, **AmplifyJs**, **Bootstrap**) developing mostly the frontend part while reviewing, designing and gluing together the backend.

#### Yoox | January 2010 - April 2012 | Bologna, Italy

My job consisted mainly in **Service Oriented Architectures** and **RESTful APIs** design on the Microsoft stack. I was in charge of architecting and developing **distributed** applications using micro services in C# on the .net Framework, successfully handling millions of requests per hour. *Scrum* was part of my daily routine but we used to **XP** and **KanBan** as well. I approached software development mostly with **TDD** and **BDD**, always in **continuous integration** and **continuous delivery**.

#### Expert System | October 2004 - December 2009 | Modena, Italy

This job introduced me to **Semantics and Linguistics** and still today **Natural Language Processing** along with **Information Retrieval** are two of my main interests. I’ve successfully delivered a wide range of server and client applications for the **Windows** and **Linux** platforms using mostly **C++**, **MFC**, **boost** and later **C#**. My love for algorithms and data structures plus my obsessive perfectionism pushed me to come up with my own take on prefix trees for fast dictionary lookup in memory constrained environment.

#### Milo | June 2003 - September 2003 | Modena, Italy

Software development for automation. I was in charge of developing a **real time debugger** for Motorola microcontrollers (USB, RS-232, GPS tracking system) using **C**, **C++**, and ASM.

## Personal Experience

#### 2014 - 2016

I’ve built on a mobile app using **React Native**, handling backend calls on Azure using **Microsoft Orleans**, a distributed actor framework, and sharding data based on geo location using a geohash algorithm.

Currently researching and studying Machine Learning problems, specifically Recurrent Neural Network, closely following recent developments and publications (the work of Hinton and Sutskever in particular).

#### 2013-2014

I wrote a kernel driver (**KMDF**, **HID**, **USB**) in **C** for Windows 8.1 in order to implement a multi touch functionality (with gestures) for my MacBook Pro because the Apple driver for Windows is extremely basic and lacking. I’ve also been writing small single page web apps using **AngularJS**.

#### 2012-2013

I took a long break from the computers this summer and picked up many sports like sailing and cycling (I bought a bicycle and travelled from Milan, Italy to Santander, Spain in 20 days, 1842 Km -\_-). But I’ve also been experimenting with the new Windows 8 metro style apps (**Javascript**, **CSS**, **HTML5**), studying **Redis** source code (I had this crazy idea about a Linux kernel module that miserably failed) and increased my knowledge about UX and UI design.

#### 2011-2012

I spent nights working on web apps that used technologies such as **Tornado**, **Node.js**, **Redis**, **MongoDB**, **RabbitMQ** and **Memcached** running (mainly) on **Amazon AWS**. I’ve moved away from **AppEngine** after 2 years of experience. In the choice of a stack I opted to have as many movable parts as possible, the more heterogeneous the better; this is usually a mistake for production applications but my choice was based on the fact that there is a lot to learn this way, and learning is *fun!*

#### 2004-2011

Meanwhile in My-Spare-Time my focus shifted forth and back between **games development**, **script languages implementations** and **drivers development** (Linux and Windows, 3Dfx Glide, mesa/dri) but in **2008** I refreshed my **HTML** skills and finally settled on web development. My interest about the web introduced me to **PHP** and **Javascript** in the early days of DHTML, but the languages of choice this time were **C#** (ASP.net, ASP.net MVC) because I knew it and **Python** (AppEngine, Django) because I fell in love with it.

#### 1994-2004

The first line of code I’ve written was in **BASIC** and after a few years of experimentation with different languages I moved to **C** and then **ASM** because I wanted to develop my own operating system (monolithic kernel, single-threaded, bootloader and a basic filesystem), later I switched to **C++** because I felt it was more suited for writing **3D game engines**, I worked for a year using **DirectX** then moved to **OpenGL**. But writing a 3D game is a huge task for a single person and I got lost when rolling my own script language (stack-based VM, event driven, C like syntax, configurable EBNF grammar) using, of course, **boost::spirit**.