Brice Fernandes

I am a talented and versatile software engineer with a broad range of technical expertise, as well as entrepreneurial and leadership experience. I am looking for an engaging technical leadership or problem solving role that will leverage my broad experience and let me contribute to a culture of technical excellence and growth.

Contact Information

416 City Road	*e-mail:*	brice@fractallambda.com
Sheffield	*website:*	fractallambda.com
S2 1GD	*twitter:*	@fractallambda
UK	*mobile:*	07548312227

Languages

English, French (Native proficiency)
Spanish (Basic reading & listening comprehension)

Education

The University Of Sheffield   2006 - 2010
BSc. Physics with Computer Science

Technical Skills

PROGRAMMING: Functional Programming, Python, Javascript (ES6, React, Redux, NodeJS, Babel), Scheme, Clojure, Jython, Java (OpenGL in Processing, GUI), Shell scripting (Bash), DVCS (Git, Mercurial), C, F#, C#, Unit Testing, Regular Expressions, Test Driven Development, RDF, Agile Methodologies (Scrum, Kanban, Pair Programming ...), Lean Software Development

ADMINISTRATION: Unix (GNU/Linux) administration, Docker, Apache, NGinx, Lighttpd, LAMP maintenance and administration, Virtualisation experience with VirtualBox and VMWare.

APPLICATIONS: Common productivity packages on Windows, OSX and Linux, TEX, LATEX, and BIBTEX, Vim, Eclipse, 2D/3D CAD/Drafting (Solid Edge)

OTHER: AWS (S3, EB, IAM, EC2, CloudFront, Route53 ...), Game Development, Unity3D game engine, Firebase, Gulp, Natural language processing with NLTK, WxWidgets (Python), Numpy and Matplotlib (MATLAB equivalent), Python Imaging Library, Glib, GTK, Imagemagick, jQuery, SNMP, Analog and digital electronics: Basic filters, Digital Logic. HTML5, CSS, Less/Sass.

Talks & Presentations

Using and Abusing Ruby For Computer Science Great Good   March 2016
Code and slides (PDF) available.

Building Objects With Functions   June 2015
An interactive version as well as a recording are available.

Getting Started With DataScript and Reagent   November 2014
Slides are available online.

Relevent Experience

Founder at Decacoder.com   October 2015 - January 2016
Founded an online education company delivering high quality online education to developers via a custom platform. I led the development of a scalable media delivery platform from scratch while also being responsible for all other business areas. I also set up a continuous integration and continuous deployment pipeline using AWS services, and was responsible for the educational design and user experience of all students using the platform.
KEYWORDS: *Product development, Leadership, Javascript, ES6, React, Babel, Firebase, Continuous integration, Continuous deployment, AWS, Gulp, Stripe, Education, UX*

Startup Mentor & Coach, Accelerate Cambridge　　　　　　　　2013 - 2016

I was selected to be a founding coach and mentor for the University of Cambridge Judge Business School startup accelerator Accelerate Cambridge. I delivered a startup founder education curriculum and coached teams on product design, technology strategy, development process, team management, pitching for investment and clear communication. Several of the startups I mentored received prestigious awards, including winning the Duke of York's Pitch@Palace competition.

KEYWORDS: *Startups, Coaching, Business modelling, Pitching, Leadership, Investment, Technology Strategy*

Instructor & Coach, Ignite Program　　　　　　　　　　　　　　July 2015

I was an instructor and coach for the University of Cambridge Judge Business School Ignite programme. The Ignite programme is a one week course aimed at transform existing early stage enterprises through high quality lectures and challenging workshops. I was responsible for leading workshops during the program, ensuring that each attendee adopted the knowledge shared into their business practice.

KEYWORDS: *Startups, Education, Coaching, Leadership, Event facilitation, Business Modelling*

Founder, Cambridge Programmer Study Group　　　July 2014 - December 2016

Founded the most active programming meetup in Cambridge, meeting twice a week to study computer science topics. Over two years we studied Machine Learning, Cryptography, Concurrency and Functional programming, amongst other topics.

KEYWORDS: *Machine Learning, Functional Programming, Scheme, SICP, Neural Networks, Cryptography, Concurrency, Computer architecture, Compilers, Interpreters, Community building*

Instructor, F# developer course　　　　　　　September 2015 - August 2016

Successfully kickstarted an online tutorial series on the F# programming language. Designed and delivered a curriculum that taught the real world applications the F# language and functional programming, including type-driven design.

KEYWORDS: *F#, Functional Programming, Education, Screencasting, Kickstarter, Video production*

Instructor, Unity3D Development Course　　　　　　August 2014 - August 2015

Sucessfully kickstarted an online tutorial series on game development using the Unity3D game engine. Designed a curriculum to teach programming for game development in the C# language, including the fundamentals of computer science to a novice audience. The project was delivered over the Udemy.com online platform and reached over 100 000 students. The complete course was accredited for higher education credits and worth 10 European Credit Transfer System credits ($\sim$10% of an undergraduate degree).

KEYWORDS: *Education, Unity3D, C#, Game Development, Screencasting, Kickstarter, Video production*

Organiser and Facilitator, Startup Weekend　　　　　　　　　2013 - 2016

I was an active organiser for the Cambridge Startup Weekend, organising and facilitating several weekend long events aimed at driving the entrepreneurship spirit in the attendees. Several teams from these events went on to form companies, including several still in operation today.

KEYWORDS: *Event facilitation, Community building, Startups*

Project lead, Processed　　　　　　　　　　　　October 2013 - August 2014

Created a business process automation product with ideas from Flow Based Programming to automate common tasks in a business. Developed an SVG and Javascript online application to visually edit workflows, as well as embeddable widgets to place workflows on customer websites.

KEYWORDS: *Business Automation, Business Intelligence, Javascript, SVG, Firebase*

Software Engineer, Cambridge Broadband　　　　　　March 2011 - October 2013

Developed and maintained a wide range of software to enable and support a microwave backhaul product at Cambridge Broadband Ltd. Worked on cross platform graphical user applications, embedded C network management using SNMP, internal tools and existing product maintenance. Was also part of a process improvement team that re-designed the software and product development process for the company. Took responsibility for technical recruitment of C developers, drafting requests for quotes and selecting and managing contractors.

KEYWORDS: *C, PPC, Embedded, Python, Linux, GTK, SNMP, Process improvement, Agile, RFQ, Recruitment*

Intern, Intelligent Systems Research Laboratory   Summer 2010

Developed a Flow Based Programming framework to support an anomaly detection subsystem for the Intelligent Systems Research Laboratory at the University of Reading. Embedded Jython, Groovy, and Javascript programming languages in the Flow Based Programming Framework to enable application developers to work in their language of choice.

KEYWORDS: *Java, Groovy, Jython, Flow Based Programming, Embedded languages, JVM, Distributed computing, Machine Learning, Clustering, Anomaly detection*

Intern, Organisations, Information and Knowledge Group   Summer 2009

I Worked as part of the Organisations, Information and Knowledge Group at the University of Sheffield building a term recognition system for engineering documents. I developed a semantic extraction component in Java using the NLTK library accessed in Jython. Also designed a domain ontology for aerospace engineering.

KEYWORDS: *Java, Jython, Java Servlet, XML, RDF, Tomcat, NLTK*

Developer, LEDCube   January 2009 - May 2009

Worked on a persistence of vision project. Developed a multithreaded application stack for custom hardware in a small team. OpenGL frontend written in Java communicating to microcontroller programmed in AVR C over custom serial protocol to control digital logic. I also manually optimised the Java implementation of the communication protocol from 900ms+ transmission latency to 112ms.

KEYWORDS: *Java, AVR, C, Microcontroller, Multithreading, State Machine Protocols*

Engineering Education Scheme   2004 -2005

Worked in collaboration with Yorkshire Water to solve grit damage problem in sludge treatment plans. Designed and prototyped a solution as part of a team that became Young Engineers for Britain regional finalists. Earned BA Crest Gold Award.

KEYWORDS: *Problem Solving, Teamwork, Drafting*

Trainee CAD Engineer, AESSEAL head office   Summer 2004

Worked as trainee CAD engineer for international engineering company designing and modifying mechanical seals and 3D assets for corporate literature and website using 3D drafting software.

KEYWORDS: *Drafting, 3D CAD, 2D CAD, Solid Egde*

Awards   BA Crest Gold Award
Young engineers for Britain Regional Finalists 2005
Best Technical, Startup Weekend Edingburgh August 2012
Winner, Startup Weekend Sheffield July 2013
Winner, Startup Weekend Sheffield July 2014