**Sebastian M Cheung, MRGC, BEng, MSc, CQF**

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**PROFILE**

Experienced **DevOps-Big Data-Full Stack Developer-Silicon Chip Designer** with combined over 23 years of experience in designing, developing, testing and leading development teams to build IoT, Object Orientated Internet/Intranet, mobile apps and custom electronic systems in various methodologies using both open source frameworks as well as proprietary technology stacks.

**KNOWLEDGE**

|  |  |  |
| --- | --- | --- |
| 1. Python 5 years 2. Flask 2 years 3. Django 1 year 4. Matlab 2 years 5. Mathematica 1 year 6. Android 5 years 7. Angular.js 1 year 8. Scala 2 years 9. Java 6 years 10. React.js 1 years | 1. C++ 2 years 2. IoT 2 years 3. SQLite 3 years 4. MongodB 2 years 5. Redis 1 year 6. Git 5 years 7. Meteor.js 1 year 8. Ansible 1 year 9. Docker 2 years 10. Node.js 2 years | 1. Hadoop 1 year 2. Spark 1 year 3. Gradle/Maven 3 years 4. AWS 1 year 5. Splunk < 1 years 6. Jenkins 2 years 7. OSX/Linux 5 years 8. Cadence 10 years 9. Spring - Boot 1 year 10. Analog/FPGA10 years |

**ACHIEVEMENTS**

1. Built industry’s first complete IaaS automation flow between spark-ACS (Sky)
2. Currently 8 live Android mobile apps in Play.google.com.
3. One of the list of preferred external consultants for NXP/Philips.
4. World’s first 8 Channel Analog Mux SMBus Interface LTC1380 ‘98, still in production 2018.
5. Contributed to 2 silicon startups in San Jose, CA, USA (both got acquired.)

**PROFESSIONAL EXPERIENCE**

(Contract Roles)

**BNP Paribas Fortis,** Brussels (Sep 2017 to Dec 2017, extension to Jun 2018) (Fixed Term Contract)

DevOps Coach

As part BNP Agile digital transformation, assimilated and coached CiPaaS CI/CD tools, process workflows from IBM mainframe middleware MQ, z/OS to Android mobile BDD/TDD to various squads. Hands-on coaching range from CiPaaS provisioning,, Python BDD, IaaS software best practices, to stakeholder meetings.

Skills used: Jenkins Groovy pipelines, Docker, Ansible Container, SonarQube, Kubernetes, GraphQL, Swagger, Behave

**DialogSemiconductor,** Munich (Jul 2017 to Sep 2017) (Fixed Term Contract)

DevOps /Python Architect Developer

By extending the Atlassian JIRA RESTful API with webhooks, this project customizes workflow by extracting selected attributes from JSON responses, to provide a responsive UI for managing various multiple internal project statuses.

Skills used: Python-Flask/AppBuilder, Pandas, HighChart, Selenium Web Driver API, JIRA-API, AWS, React/Redux

**Fortress Gain Technology Limited,** London (Sept 2014 to present).

Founder

Founded IT contracting company involved in enterprise software, native/cross platform mobile apps and chip design. Previous clients include as Geeny.io, Sainsbury’s, Sky, Carphone-Dixon, HSBC, Registry of Scotland, BAML, KPN Consulting, Future Cities Catapult, Intel, NXP Semiconductors and Paze.

Skills used: Python-Flask, AWS, Spring-Boot, Splunk, Quantum QIS, Scala, Matlab/Simulink, Git, Bash, Node.js

**CrowdVision,** Greenwich, London (Dec 2016 to Jan 2017) (Fixed Term Contract)

Node.js /Python Developer

Developed Node.js/Express Access Control List business logic to provide role based authorization resource access for real-time crowd data analytics solutions for London Heathrow. Data collection, sorting and aggregation.

Skills used: Node.js, Angular2.js, AWS S3, WebStorm, Github, GitKraken, Python, Boto3, Numpy.

**Geeny.io, (Telephonica startup)**, Berlin (Oct 2016 to Dec 2016) (Fixed Term Contract)

Scala/Node.js Developer

Implementation of Node.js/Hapi.js RESTFul Microservices API WebHook addOns for new subscriptions, as part of the Geeny.io Platform as a Service and DogSens IoT launch. These APIs communicate via MQTT to backend storage AKKA actors for asynchronous message handling. Unit testing with Sinon, API validation with Joi.

Skills used: Hapi.js, Joi, Node.js, AKKA, Redis, WebStorm, Github, MQTT, Swagger, TravisCI

**Sainsbury’s**, London (Aug 2016 to Oct 2016) (Fixed Term Contract)

Big Data Analytics Reporting Developer

Introduced Angular2/PlotlyJS/Strongloop into Sainsbury’s digital transformation Predictive Asset Maintenance POC, with MongodB and other Big Data frameworks. Used PySpark to wrangle and ingest data. It provided real-time update and analytics for improved business decision making for stake holders.

Skills used: PySpark, AWS, Angular2, OAuth2.0, StrongLoop, PlotlyJS, Node.js, MongodB, Webpack, Docker, Jenkins

**Sky - Enterprise Network Group,** London (Mar 2016 to Sep 2016) (Fixed Term Contract - 5 extensions)

Senior DevOps / Meteor.js /Python Full Stack Developer

Project built from ground up, IaaS automation middleware, which sits between ServiceNow Spark Ticket Management System and Cisco Secure Access Control System (ACS). Architecture workflow allows network infrastructure hardware to be managed asynchronously. An industry first of its kind. Well received by Sky management.

Skills used: Meteor.js, Docker, Angular2, OAuth2.0, Docker, ServiceNow, ACS, MongodB

**Carphone Warehouse,** London (Dec 2015 to Jan 2016) (Fixed Term Contract)

Senior Java Back-End Developer

‘Common Data Model-repository-service’ is a Java Spring-Boot REST API that serves a collection of predefined JSON domain objects that will be used to build a Resource Model for different country and market segments to ensure standardisation of key field properties and to allow consistent labelling of data regardless of channel/domain.

Skills used: Java 8 EE, RabbitMQ, Spring-Boot, Spring-Initializr, MongoRepository, Intellij, JIRA, Confluence, Bamboo

**HSBC/EMC,** London (Dec 2014 to Apr 2015) (Fixed Term Contract - 1 extension)

Python Full Stack Developer

Designed Python/Flask Storage SRDF Role Swap for Tier 0/1 distributed data applications to manage Web Front End and Flask Back-End to manage device groups, mapping information, search, configuration of SQLite database LDAP authentication, and logging of SRDF synchronous replication to the secondary data centre. REST API development.

Skills used: Python-Flask/App-Builder, jQuery, Angular.js, Jinja2, SQLAlchemy, Bower, TDD, Bash, RedHat Linux

**Registry of Scotland,** Edinburgh (Sep 2014 to Oct 2014) (Fixed Term Contract)

CoffeeScript/Python Developer

Designed Python/CoffeeScript filtering rules and RESTful API using JavaScript RegExp as well as other Python backend tasks, R to Python conversion of a large government Big Data system overhaul to implement Scotland’s Act 2012 property deed registration, using national population dataset of property owners. Unittesting and CI integration.

Skills used: CoffeeScript, Python, R, Flask, AngularJS, jQuery, Grunt, Node.js, MongoDB, Bower, Ansible, Jenkins

**Bank of America Capital Markets,** London (Jun 2014 to Aug 2014) (Fixed Term Contract)

Python Developer

Within the FX Options, vanilla and exotic single and multi-asset FX Options market developed and tested Support Dashboard using Quartz Framework for Risk & Pricing, Latency Trade Capture & Life Cycle Platform, tasks include Trade Replication, Access Control/User Access, Platform Standardization and Trade Migration.

Skills used: Python, Big Data Time Series, Quartz, Direct Acyclic Graph Database, Qzap, QTracker, MapReduce, TDD

**Incopro,** London (Mar 2014 to Apr 2014) (Fixed Term Contract)

Lead Python/Django Developer

Designed and tested security authentication and other UI side of a Big Data, distributed data web content protection project to help media, film and luxury branded clients to visualize, and also collate web crawling and image filtering matching machine learning algorithmic via Scikit-Learn to determine level of authenticity.

Skills used: Python, Boto3, AWS, OAuth 2.0, Django, Selenium BDD, Hadoop, Cassandra, D3JS, Sencha EXT JS4.

**Explovia**, Holborn, London (Jan 2014 to Mar 2014) (Fixed Term Contract)

Lead Android/Scala Developer

Lead Android team and developed native Android port of company’s iOS initial release, events based system, eTicket generation and chatting RESTful App. Worked on responsive fragment UI and back-end data-transfer and payments.

Skills used: Android, Java 8, Volley-API, Stripe Payment, Pusher Chat, Google Map, Gson, Git, Robotium BDD.

**NXP Semiconductors**, Eindhoven, Netherlands (Nov 2013 to Jan 2014) (Fixed Term Contract)

Python/LabView/C++ Validation Consultant

Designed testing patterns on post-silicon validation of sensor and relative humidity chip ‘SEN208’ for mobile smartphone manufacturer using Manchester digital encoding/I2C interface control.

Skills used: LabView, Python, Numpy, Pandas, SciPy, Sigma Delta Data Conversion Technique, Manchester Coding.

**3Chillies**, Reading, UK (Apr 2013 to Jun 2013) (Fixed Term Contract - 1 extension)

Lead Android/Scala Developer

Ported C# Windows, iOS version of ‘[Microsoft TechNet Companion](https://play.google.com/store/apps/details?id=com.technet)’ into Android framework, a Microsoft news/events feed app based on RESTful API development.

Skills used: Windows Azure Cloud Services, OAuth 2.0, Android/Java 7, Team Foundation Servers, Gson/Json Parser.

**AppDevelopers**, Bedfordshire, UK (Nov 2012 to Dec 2012) (Fixed Term Contract)

Android/Java/Scala Developer

Developed ‘[MPlayer](https://play.google.com/store/apps/details?id=com.aerofi.monarch)’, an in-flight entertainment and shopping flight app using multicast credit card payment and video/music streaming technology. Designed UI fragments, login authentication and RESTFul API data-transfers.

Skills used: Android. Gradle, JVM, OAuth 2.0, Java 7, Python, SQLite, Git, Mac OSX.

**ConnectIB**, Bristol, UK (Sep 2012 to Oct 2012) (Fixed Term Contract)

Android / Scala Consultant

Developed and tested ‘[LiverpoolOne](https://play.google.com/store/apps/details?id=lb.android.lone)’ Official App for shopping, leisure and dinning in the heart of Liverpool City Centre. Worked on both RESTful, UI front-end XML and back-end to JavaScript backend, designed the Tabhost UI.

Skills used: Android, C#, JVM, JavaScript, Git, Mac OSX, TDD, Bash, Pair Programming.

**CloserTag**, London, UK (Aug 2012 to Sep 2012) (Fixed Term Contract)

Android /Scala Consultant

Bug fixed for ‘[Property Radr](http://www.bestappsmarket.com/p/app?appId=41752)’, an App that search for house of your dreams while on the go. It searches property for sale or rental using RESTful geolocation services. Added custom font features, UI graphics and IP address testing.

Skills used: Android, JVM, C#, XML, Google Map, SQLite, Android DAO, Nestoria API, Git, Pair Programming.

**Intersil**, Harlow, UK (Mar 2012 to Apr 2012) (Fixed Term Contract)

IC Design Consultant

Assisted with power management silicon IC debug of white LED boost-converter for Apple iPhone devices. Resolved systems issue of over current consumption using layout-debugging tools.

Skills used: Cadence Analog Artist, Virtuoso Layout, Dracula, Perforce, C++.

**N3RD**, London, UK (Dec 2011 to Jan 2012) (Fixed Term Contract)

Android/Scala Developer

Developed and tested ‘[iRoking](https://play.google.com/store/apps/details?id=com.ascenso.iroking)’, a music-streaming player with user authentications, favourite play-list. Worked on UI design using various Linear and RelativeLayouts, Unittesting TDD.

Skills used: Android, C#, Scala, Java, XML, Unittest TDD, Git, Mac OSX, Bash.

**Cypress Semiconductor,** Cork, Ireland (Aug 2011 to Nov 2011) (Fixed Term Contract)

Analog IC Design Consultant

Redesigned 5th generation TrueTouch capacitive touchscreen FPGA. Designed SAR analog to DSP converters.

Skills used: Cadence Analog Artist, Python, VerilogA, C++.

**Ricardo**, Cambridge, UK (Jun 2011 to Aug 2011) (Fixed Term Contract)

Android/C++ Developer

Developed ‘Footlite’ Android Java C++ concept event based application, which aims to improve the driving behaviour of motorists for prevent accidents. Built accelerometer interface, managed C++ codes from Matlab to Android interface.

Skills used: Android, Scala, Java, C#, Xamarin, Git, Matlab, JNI, C++, STL, TDD, Pair Programming, Bash.

**Garfield Microelectronics**, Stroud, UK (Mar 2011 to Apr 2011) (Fixed Term Contract)

Analog IC Design Consultant

Assisted with spectre simulation and characterization of CMOS ESD circuit protection devices so that circuits are protected from human handling for up to 2kV.

Skills used: Cadence Analog Artist, OCEAN, and Virtuoso Layout.

**Philips Innovative Group**, Leuven, Belgium (Oct 2010 to Jan 2011) (Fixed Term Contract)

Android /C++ Developer

Developed and tested ‘SafeSound’ Android Java app, which mines data from daily usage and feedback to users when threshold exceeds health-safety guidelines, thereby regulating volume to prevent long-term hearing damage.

Skills used: Android, C#, Eclipse, TDD, BDD, Pair Programming, Bash.

**Philips Consumer Group**, Brugge, Belgium (Jun 2010 to Oct 2010) (Fixed Term Contract)

FPGA / PSoC Engineer

Validation of capacitive proximity antenna PSoC, touch and light sensing design, measurement analysis for high-speed common interface for high-end LCD TVs.

Skills used: FPGA, PSoC, High-Speed Agilent Digital Oscilloscopes.

**Innovision Group**, Cirencester, UK (Nov 2009 to Mar 2010) (Fixed Term Contract)

Senior IC Design Consultant

Designed CMOS 9-bit 54MHz fully differential signal processing ADC delta modulator for NFC RFID tag.

Skills used: Cadence Analog Artist, Matlab, and Simulink, C++.

**Integrated Device Technology**, Boston, USA (Dec 2008 to Feb 2009) (Fixed Term Contract)

IC Design Consultant

Designed power IC (for Li-Ion charging) of a CPU programmable 1MHz switching dc-dc boost controller architecture.

Skills used: Cadence Analog Artist, Matlab, C++, and Simulink.

**Wolfson Microelectronic**, Edinburgh, UK (Jan 2008 to Sep 2008) ((Fixed Term Contract - 1 extension)

Senior IC Design Consultant

Designed 6200 & AudioPlus’s true differential reconfigurable programmable gain IC.

Skills used: Cadence Analog Artist, Matlab, Simulink, and Python.

**Ericsson Mobile Platform**, Lund, Sweden (Sep 2007 to Jan 2008) (Fixed Term Contract)

Senior RFIC Design Consultant

Redesigned a 26MHz crystal oscillator with fine/coarse trimming for a RFIC fractional-N PLL.

Skills used: Cadence Analog Artist, OCEAN scripting, Erlang.

**Austriamicrosystems**, Graz, Austria (Aug 2007 to Sep 2007) (Fixed Term Contract)

Senior Analog IC Design Consultant

Performed root cause analysis of a 4th-order sigma-delta modulator IC for signal processing of oil purification process.

Skills used: Cadence Analog Artist, OCEAN scripting, C++.

**Intel**, Swindon, UK (Jul 2006 to Aug 2007) (Fixed Term Contract, 1 extension)

Senior RFIC Design Consultant

Designed quadrature baseband AGC IC with distortion reduction technique for DVB-T/H RFIC silicon tuner IC. Designed these baseband circuits optimized for NF, IP3 and S-parameters.

Skills used: Cadence Analog Artist, OCEAN scripting, C++.

**Qimonda**, Padova, Italy (Dec 2005 to May 2006) (Fixed Term Contract)

Senior Analog IC Design Consultant

Analog design of multi-phase dc-dc inductorless charge pumps for sensing of Read/Write memory cells.

Skills used: Cadence Analog Artist, OCEAN scripting, Titan.

**NXP**, San Jose, USA (Oct 2005 to Dec 2005) (Fixed Term Contract- 1 extension)

Analog IC Design Consultant

Simulated an NFC ASIC transceiver project for digital hearing aid using a 24-bit ultra-low power Coolflux DSP. Designed dual phase charge pump for power regulation.

Skills used: Cadence Analog Artist, PStar, C++.

**NXP**, Nijmegen, Netherlands (Oct 2004 to Oct 2005) (Fixed Term Contract)

RFIC / Microwave IC Design Consultant

Designed Power Control Loop (class AB), PA PWL bias, quad-band 850MHz-1.9GHz RFIC amplifier GSM/EDGE.

Skills used: Agilent ADS and Cadence Analog Artist.

**Silicon Image**, Hannover, Germany (Mar 2004 to Sep 2004) (Fixed Term Contract)

IC Design Consultant

Verification of TLE7719/20 HV automotive airbag control IC on SPT5 0.7um BiCMOS process.

Skills used: Cadence, Automotive Electronics, Excel, and Word.

**Diodes Inc**, San Jose, USA (Dec 2003 to Mar 2004) (Fixed Term Contract)

IC Design Consultant

Designed the AP1604 Multi/current-mode dc-dc buck switching regulator on TSMC 0.5um single-poly process.

Skills used: Cadence Analog Artist, Excel, and Word.

(Full Time Employee)

**iWatt**, Los Gatos, USA (Apr 2002 to Dec 2003) (acquired by DialogSemiconductor 2013)

Senior IC Design Engineer

Designed in UMC 0.35um CMOS high speed, low power, low kickback, low-switching noise sub-10ns comparators for embedded 3.5-bit flash ADC for iW2202. An industry first with patent AC-DC digital power IC with DSP core.

Skills used: Cadence Analog Artist, OCEAN scripting, Word, Excel.

**Capella Microsystems**, San Jose, USA (Jun 1998 to Mar 2002) (IPO Taiwan 2009)

Senior IC Design Engineer

Designed 0.5um CMOS high-speed class-AB (f 3dB > 100MHz), low-noise (85dBm) analog CMOS optical trans-impedance pre-amplifier (CMI9645 and CMI9613) and single phase Hall sensor servo/motor control IC (CMI8813).

Skills used: Cadence, Hspice, Excel, and Word.

**Linear Technology,** Yishun, Singapore (Mar 1995 to May 1998)

IC Design Engineer

Designed LTC1380/93 analog mux, world’s first with SMBus interface. Also supported: LTC1390/91 and its use with LTC1400 400ksps SAR ADC, LTC1426 dual 6-bit PWM DAC (0.01LSB DNL), and its use with LT1182 CCFL/LCD, Wrote C test subroutines for testing.

Skills used: C++, PSpice, LTSpice, Word, Excel.

**Philips**, Hamburg, Germany (Oct 1991 to Oct 1992)

Intern C++ Software Developer

Developed C++ algorithms to verify Philips SAA5246AP/E Videotext I2C bus interface decoders.

Skills used: C++, Cscape GUI, Windows.

**CI Shipping**, London, UK (Aug 1988-Dec 1988)

Junior Electronics Radio Officer)

Served on merchant navy and worked on fault-finding and maintenance of telex, radiotelephony, and radiotelegraphy (Morse code 20wpm) on high powered (25kW) pulsed klystron radar/radio equipment.

**EDUCATION**

(2013) CQF Certificate in Quantitative Finance, FitchLearning, London. Mathematica HJM Gaussian Copula 92%.

(1993-1994) MSc Degree in Microelectronics Systems Design, Southampton University.

(1989-1993) BEng Hons. Degree in Electrical and Electronics, University of Portsmouth.

(1985-1988) HNC & OND Merchant Navy College, Kent : Engineering and Business (21 Distinctions 9 Merits)

**ACCREDITATIONS**

Dec ‘16 edX: HarvardX PH526x: Using Python for Research: Numpy, Matplotlib, 92%.

Apr ‘16 Coursera: Investment Management in an Evolving & Volatile World, HEC Paris/AXA Invest. Mgrs

Mar ‘16 Coursera: Server-side Dev with Node.js, Hong Kong University of Science and Technology (TBD)

Mar ‘16 Coursera: Big Data Analytics, University of California, San Diego. License 8YDCN5VYYCHB 98.7%

Mar ‘16 Udemy: Mastering Ansible https://www.udemy.com/mastering-ansible/learn/#/

Mar ‘16 Coursera: Hadoop Platform & App Framework, University of California, San Diego. 7HCM458UVWP2 99.2%

Feb ‘16 Coursera: Introduction to Big Data, University of California, San Diego. License CTFZW2YM99SM 100%

Jan ‘16 Coursera: Web App Dev. (JavaScript & MongoDB) University of London. License JX6XP7WEQSEE 100%

Jan ‘16 Coursera: Influencing People, by University of Michigan. License WED9PUZPA2PP [92.8%](https://www.linkedin.com/redir/redirect?url=https%3A%2F%2Fwww%2Ecoursera%2Eorg%2Faccount%2Faccomplishments%2Fverify%2FWED9PUZPA2PP&urlhash=PtSc&trk=profile_certification_company_title)

Jan ‘16 Coursera: Advanced Data Structure Java, University of California, San Diego. License LFHA2UTCGZEF 99.6%

Dec ‘15 Coursera: Coffeescript Introduction to Meteor.js Development. License 6R2AAZB9DKCL 94%

Sep ‘15 Coursera: Introduction to Programming with MATLAB, by Vanderbilt University

Dec ‘14 Coursera: Programming for Everybody (Python), by University of Michigan. License BE8HPN979S 100%.

Mar ‘11 Coursera: Machine Learning and Technology Entrepreneurship, by Stanford University, California.

Jun ’89 Radio Telegraphy Amateur Class A License Granted

**LINKS**

<https://www.ros.gov.uk/about-us/2012-act>

<https://play.google.com/store/apps/details?id=com.pernod.ricard.uk.summerparty&hl=en_GB>

<https://play.google.com/store/apps/details?id=com.technet&hl=en_GB>

<https://play.google.com/store/apps/details?id=lb.android.lone&hl=en_GB>

<https://play.google.com/store/apps/details?id=com.himumsaiddad.armyfit&hl=en_GB>z

<https://play.google.com/store/apps/details?id=com.aerofi.monarch&hl=en_GB>

<https://play.google.com/store/apps/details?id=com.ascenso.iroking&hl=en_GB>

<http://startups.co.uk/tech-pitch-explovia/>

<http://property-radr-beta.android.informer.com/>

<http://www.foot-lite.net/>

<http://www.homecine-compare.com/definition-de-safesound.htm>

**PERSONAL**

Nationality: British, Languages: Chinese, English and German. Martial Arts: Yin Style Bagua Zhang since 2009

**REFERENCES**

Available upon request.