

# Oscar Byrne

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## Experience

### Full Stack Developer

May 2018 - July 2018

*Globalme*

- Adapted an open-source Python Flask application for 2FA authentication via AWS Cognito
- Developed a SPA for database administration (CRUD operations) with JQuery and Python Flask
- Managed hosted infrastructure via AWS EC2 and RDS
- Drove automation by creating a highly-modular library of Photoshop functions in Javascript
- Technologies: Python, Flask, Javascript, AWS, PostgreSQL

### Automation Engineer

November 2017 - May 2018

*Globalme, contracted by Intel*

- Managed migration of test development from India to Vancouver
- Accelerated development time by refactoring large Robot Framework code base (~15000 LOC)
- Established processes – code review, development phases – for the team in Vancouver
- Mentored (including leading training sessions in Git and Python) a team of 9 manual testers
- Technologies: Python, Robot Framework, Git

### DevOps Engineer

February 2017 - August 2017

*Ultrahaptics*

- Improved reproducibility of builds by creating VMs on demand using Packer and Ansible
- Developed a simple orchestration system using Python, Bash and Jenkins
- Maintained Teamcity CI pipeline, including Windows and Macintosh machines (~10 nodes)
- Technologies: Ansible, Bash, Powershell, Packer, Teamcity, Jenkins, Git

### Software Engineer

October 2014 - July 2016

*Cisco, formerly Acano*

- Developed a “write once, run anywhere” test framework using Python Selenium and Appium
- Maintained CD pipeline for Android-based custom hardware project with Jenkins and Groovy
- Implemented page object pattern with Java and Espresso
- Oversaw creation of test lab with experimental hardware
- Technologies: Python, Appium, Selenium, Java, Espresso, Android SDK, Jenkins

### Summer Studentship Computing Program

July 2013 – August 2013

*DESY*

- Programmatically analyzed the erosion of heart implants via computer vision
- Studied and worked with the world's most brilliant x-ray source in Hamburg, Germany
- Streamlined research by creating an RPC endpoint for sharing experimental data
- Technologies: Python (including the SciPy toolkit), WSDL

# Hobbyist Portfolio

## Advanced music theory with Python

<https://github.com/oscarbyrne/pyatonic>

Music theory is one of my passions. I've recently had the opportunity to dive deep into some of the concepts I've been reading about, requiring working knowledge in a host of new concepts from category theory to tree search algorithms. The result is a library of methods ultimately able to demonstrate computational creativity (yes!) by conceptually "blending" musical chords, an algorithm developed as recently as 2015. The code itself showcases my ability to write in a pythonic style: making heavy use of generators, a mastery of Python's data model, and avoiding the over-reliance on classes often found with junior developers.

## Resume builder

<https://github.com/oscarbyrne/cv>

When job hunting I find I spend an inordinate amount of time formatting my resume. To cut down on this time I created a library which creates beautifully-formatted resumes in the time it takes to hit my enter key. By storing the important data - job records and document layout - in a series of easily-editable config files and generating responsive HTML5 via a Jinja2 template, I create first-class resumes in an instant. You're reading one right now!

## Bash-embedded Python

<https://github.com/oscarbyrne/pysh>

Pysh is a tool I created in a bid to elegantly embed Python into Bash. This was a great learning experience for me where I gained an appreciation for the difference between in- and out-of-band signaling, and what exactly a fifo is good for.

## Education

### MSCi Physics (3.5 GPA equivalent)

2010 - 2014

*University of Birmingham*

During my final year project I became involved with front-line research in metamaterials, contributing to a project presented at the PIERS conference in China. Modules of study included:

- Intro to C++
- Computational Modeling of Physical Systems
- Teaching in Schools
- Image Processing

## Other Interests

- Silver smithing, rockhounding and lapidary
- Producing electronic music
- Hikes, salt lamps etc (when in Vancouver!)