Tharshan Muthulingam

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Work experience

Sep 2015 – Current

CITEL TECHNOLOGIES

Manager - Software Engineering

Work in small team of engineers. I act as the co-lead engineer for the team. I also teach new team members and improve their skill set. Have completed various projects in a team and independently.
Skills: **Python, Django, ReactJS, AngularJS, AWS**

Sep 2014 – Sep 2015

CITEL TECHNOLOGIES

Full Stack Engineer

I worked in a small team of engineers. I acted as the co-lead engineer for the team. I handle deployment and various devops tasks on top of the daily tasks and projects I would normally do.
Skills: **Python, Django, ReactJS, AngularJS, AWS**

Oct 2013 – July 2014

Google Summer of Code 2014

Intern

During GSOC I worked on the Intellego team (part of Mozilla) to develop an open source terminology driven translation engine. I also created a command line tool that will extract key terminology from a TMX file and build up a corpus of bilingual words.
Skills: **Python, Flask, HTML/CSS/JS**

Summer 2013

SuperAwesome Ltd, London

Web Developer

SuperAwesome offered an online service for kids to get toys tailored to their gender for free in return for their feedback. This was a summer internship at a London Startup where I worked as a developer in a small team: I redesigned and implemented several features, that had significant benefits for staff members. I developed a dashboard from scratch that allows users to compare many metrics important to the business.
Skills: **Python, Django, HTML/CSS/JS, D3.js**

July 2012 – July 2013

ARM Ltd, SDD Division, mbed. Cambridge, UK.

Software Engineer Intern

I was an Intern on the mbed team for my industrial year placement. I was a web application developer utilising Python and Django to improve mbed.org visually and architecturally. I developed many new features, including the stack overflow style QnA section. I also gained experience in embedded development, using C/C++ while porting the mbed SDK.
Skills: **Python, Django, HTML/CSS/JS, C/C++, LISA**

Education

2010 – 2014 **Computer Systems Engineering BEng**
Cardiff University
Favorite modules: Engineering Analysis, Electronic Engineering, Microprocessors (PIC), Digital Design (FPGA), Robotics and Image Processing (SCARA Robot, AML), High Performance Computing (CUDA, MPI, OpenMP)

Software skills

Language	C/C++, Python, Javascript, PHP, HTML5, CSS, Node.JS, PIC Assembly, PIC, Bash
Framework/Other	AngularJS, Django, Verilog, Hardware, Linux, Apache, NGINX, CUDA, ElasticSearch, ReactJS, AWS

Communication skills

Conference Talk - Feb 2014

Baby you can drive my car (with a bit of Python)

A talk I presented at the UK's first Django conference presented to members of the the Python software foundation, Django core devs, STEM researchers and local students.

Achievements

Hackathon - Nov 2013

Lead developer on winning team for University Hackathon, organised by Witler. Realtime chat room web application.

Hackathon - Jan 2014

Developer on the winning team for NHSHackday 2014. Eye tracking application for iOS tablets, utilising OpenCV.

Side Projects

Personal Project

Source: https://github.com/viperfx/ng-forum

ng-jukebox

A realtime web app that lets you play music from youtube on a host computer (a client that creates a room) and the features of the app such as adding to the playlist, rearranging the playlist, music controls such as play/pause and next are all controllable through guests (a client that joins a room). All the UI and data is updated in realtime for all clients connected their respective rooms thanks to SocketIO.
Skills: **Node, Javascript, AngularJS, Youtube API**

Personal Project

Source: https://github.com/viperfx/tmp

TMP

It is a online music service that has a web scraper in the backend built with Python and the fronted interface build using AngularJS with real time search capabilities using Sphinx Search and Django Rest Framework for backend API.
Skills: **Python, Django, Scrapy, AngularJS**

Personal Project

Source: https://github.com/viperfx/rccar

rccar

This project allows a remote control car to be controlled via a ps3 controller. The remote's cover was removed and appropriate pin were connected to an mbed microcontroller so that the car could be driven by digtal signals output from the mbed (controlled by main.cpp). The ps3 controller axis values input are taken (using pyusb) and converted to pwm signal values.
Skills: **Hardware, Python, C++, mbed**

Personal Project

Source: https://github.com/viperfx/ng-forum

ng-forum

ng-forum is a simple forum web application built using AngularJS and Django. Django REST Framework was used for the API backend and Token Authentication system. Deployable through Heroku.
Skills: **AngularJS, Django, API, Heroku**

Hackathon entry and Personal Project

Source: https://github.com/DanielKoehler/iSee

iSee

In a team we implemented a eye tracking solution for iOS tablets. This was the winning entry for NHSHackday (Jan 2014) in Cardiff that spanned for two days. This application is aimed at kids for use in hospitals, to aid in carrying out acuity measurements.
Skills: **iOS, C++, OpenCV**

Client Projects

Client Project

Live: http://stvplus.com

STVPlus

A power dashboard for the main site spoilertv.com. Built using the LAMP stack (PHP and MySQL) and the Codeigniter Framework. Frontend interface for users and backend interface for editors to manage the data.
Skills: **PHP, MySQL, Codeigniter, pubsubhubbub**

Client Project

Closed Source

PartySphere

A mobile first web application built using AngularJS and Django. Allows users to view and book night club events around London.
Skills: **Django, AngularJS, Facebook API**

University Projects

Year 2 Group Project

Learning Central

Teaching Support application using Java. University group project using Agile Development techniques.
Skills: **Java, Swing, SQLite**

Year 3 Dissertation

Online Laboratory for Embedded System Design Courses

The project offers a clock-cycle accurate simulation of an embedded system. The sim- ulation is controllable via a user-friendly C++ API that can access various protocols such SPI, UART, I2C, PWM and GPIO commonly found in microcontrollers. This system can be controlled from within a browser, so the user can access an IDE like interface to interact with the simulator. This simulator and the developments on top have been used to design various experiments, including close loop systems in the form of exercises to teach students about how modern microcontrollers work.
Skills: **mbed, Hardware, C/C++, Python, HTML, CSS, JS, LISA**