Terry Wong

Contact Information

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Summary

I am a software engineer with 10 years of extensive software development experience, involved in many projects with agile and test/behaviour driven development at different stage of a development life cycle. In my career, I have successfully delivered many projects with my solid technical skills. I strongly believe in the benefit of continuous delivery and reproducibility, as it is the approach to produce high quality software and maintainable code base, which testing and deployment pipeline are fully automated. I particularly enjoy working in a creative and dynamic environment, as it sits well with my 'can-do' and enthusiastic attitude.

Core Technical Skills

- Fluent in Python, Javascript, experienced with Django, React, NodeJS, Babel, Webpack
- Database design and implementation in PostgreSQL, MySQL
- Experienced with C/C++, C#, Bash scripting and Java
- Substantial DevOps experience, Openstack(RackSpace), Heroku and AWS
- Deployment and configuration automation with Fabric and Ansible
- Continuous integration build process (Jenkins, Git, Agile, Scrum, Kanban)
- Competent in environment Linux and Macintosh
- Solid understanding of DNS(BIND9), SMTP(Postfix), WatchGuard Firewall, IPSec VPNs and encryption key cipher management
- Applied machine learning(SVM, Random Forest etc) technique to improve statistical model

Work Experience

Genomics Plc Oxford, UK

Python Developer **October 2014 - Present**

I am one of first developers in the greenfield project to create a Bayesian statistical engine to diagnose disease from genetic variants in individual. To ensure the quality of the code, we applied Agile and BDD methodology, and setup OpenStack for local cloud, with Jenkins and GIT, using Nova and Fabric started running end to end testing on each commit on a clean VM on multiple platforms in a reproducible manner. The high coverage test gives us a rapid feedback on the quality of our code, and each successful commit are then automatically deployed. The statistic model is currently subject to patent application approval.

- Developing modular Bayesian update step for a Bayesian statistical model in Python for genetic variants Interpretation Engine
- Developing end to end acceptance test driver with domain specific language with BDD
- Automating Jenkins to run each commit on clean VMs for various tests, artefacts from each build are tagged by Artifactory
- Training the statistical model, automate daily clinical comparison and improve model input, compare our model with the hold out set, plotting the statistical result with Matplotlib
- Developing Django application for RESTful JSON API with Backbone to perform DNA sequence analysis and analytical result visualisation, deploy with Gunicorn, Supervisor and Nginx
- Designing the JSON structure for an iPhone application interface for Genome-Wide Association Study
- Compiling a DNA variants knowledge base in Python for common variants annotation in order to speed up model calculation

Tessella Plc Abingdon, UK

Senior Analyst and Programmer / Manager **April 2008 - September 2014**

At Tessella, I was a senior analyst programmer worked on variety of projects, including one which was inaugurated by the Royal Highness. I have also voluntarily joined the Dev/Op team for 2 years in order to fill in the gap in my technical knowledge. And after that I involved in developing cutting edge single page application with Python / Django projects with RestAPI and Backbone.

- Developing the C# web application for Syngenta formulation robot which was built by Bosch, and the opening was officially inaugurated by Princess Anne

- Developing the C# web application for AkzoNobel for room painting visualiser, this allows user to visualise the result of painting by choosing a colour and shade and apply it to the image of a room, and the software perform edge detection and handle all the lighting and shade
- Setting up all WatchGuard Firewalls, routing and IPSec VPN for 8 different international offices in Tessella
- Setting up and configuring all the BIND9 DNS servers, Postfix mail relaying servers, and SSH VPN servers
- Applying Ansible as configuration management tools
- Developing web resource management with backbone and JQuery Library
- Developing HTML5 video streaming and FFmpeg video encoding web application
- Prototyping instant messaging and video conferencing with websocket and WebRTC

Dorset Software Poole, UK
Analyst and Programmer **July 2007 - March 2008**
At Dorset Software I was a software developer worked on a plant classification software, it allows botanist expert identifying the plant by selecting the features of the sample, and new discovery could also be added to the database so botanist expert in the world should share the new discovery. I have also worked on a NHS resourcing software using C#, it allows the user to easily visualise the staff allocation in web browser with advanced HTML and Javascript.

- Managing database operation in various development project
- Learning modern software development process, including test driven development and behaviour driven development
- Learning different programming methodologies, including extreme programming and agile

Education

Imperial College London London, UK
Msci Physics - 2.1 (Computational) **October 2003 - June 2007**
At Imperial College I built up my knowledge of complex mathematics and computation technique. I completed a Microprocessor course which I programmed Assembly code on ATMEL ATmega128 microcontroller for signal processing. I studied chaotic theory course which focus on dynamic system modelling. In my final year project, I designed and implemented a C++ modelling software that perform Kinetic Monte Carlo simulation for atomic event under radiation and plotted the 3D structure of the metal before and after irradiation.

- Applying C++ in Physics modelling in programming courses
- Learning many model of deterministic discrete time dynamical system, including Lorenz System, Logistic Map etc
- Developing software for atomic structure modelling in C++ for final year project for condensed matter theory group, the result has proved the theory of self organisation in atomic structure under irradiation under high level of confidence.

Bridgewater School Manchester, UK
A-Level - AABBB **September 2001 - June 2003**

- A in Mathematics and Further Mathematics, obtaining A for 11 exam modules out of 12
- B in Physics and Chemistry

Extracurricular Activities

Imperial College, London London, UK
Founding committee of Imperial College Model United Nations (ICMUN) **2005-2007**

- Organising the largest Model United Nations conference in United Kingdom twice in both 2006 and 2007, a small team of us managed the international conference of 600 international delegates from different world-leading universities

Language

Fluent in English, Cantonese and Mandarin

Interests and Activities

- Reading Hacker News
- Reading forum of all Science, Technology, Engineering and Mathematics (STEM) subjects
- Enjoying team sports, football, basketball, volleyball, double at badminton etc
- Learning and appreciating the culture of more than 20 different countries from travelling