Ziggy Jones

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PROFILE SUMMARY

I am an energetic problem solver, who enjoys combining technical and practical knowledge to develop innovative broad reaching ideas and solutions. Following a period as a management consultant I completed my PhD in Computer Vision at Imperial College in February and while at the same time working at a video conferencing company for the past year. I am looking for a new role where I can apply my technical skillset and gain further experience in Computer Vision, Image Processing, Machine Learning and related areas of Engineering.

RECENT WORK History

4Sight Imaging: Conputer Vision Engineer   **1/10/2016 to Current**

4Sight Imaging is an image processing and computer vision research company working in number plate recognition, intelligent automated inspection and contract research.

Starleaf: Software Engineer   **1/6/2015 to 1/10/2016**

Starleaf is a small but growing company with an international reach providing cloud based video conferencing that allows easy interoperability between third party systems as well as their own set of endpoints. I initially worked in manual testing, cloud administration and software rollout. More recently I have moved on to working on the development of an automated testing and analysis system which tests each update before release.

Achievements and Responsibilities:

- Developed system administration and update rollout tools to help manage the cloud
- Developed a test result analysis tool based on a postgres database and python Flask front end. The tool automatically loads in results from a pytest run, allowed for recording of result and meta data and persistent tagging and failure groupings. It pulls in and processes logs from the test system and the system under test. A total of ~12000 results are run and processes for each run. This system enables Starleaf to develop, test and deploy releases on a 2 week cycle.
- Set up a dedicated set of test hardware which incorporates monitoring and automatic failure recovery to improve system reliability.
- Improved the running of the test system by analysing python thread locking issues and hardware utilisation bottlenecks.
- Developed edge condition and failure tests for the cloud calling system involving blocking the system in different states by adding test hooks to the main call controller and executing various system failures.

RESEARCH

Imperial College: PhD Computer Vision   **1/10/2011 to 1/6/2015**

Member of the Communications and Signal Processing research group in the Electrical and Electronic Engineering department conducting a PhD in computer vision.

Goals: To develop a method of detecting changes in a scene using two photographs functional at wide angles (~30°) without the need for 3D reconstruction. This is a novel area with little prior art.

Achievements:

- Adapted the SIFT image feature point detector to increase performance at wide angles by up to 100x.
- Developed an image region matching technique using Markov random fields based on SIFT correlation statistics.
- Produced a method for simultaneously hypothesizing the shapes of objects and matching them using two images.

- Research group representative, liaised between students and department; organised bi-weekly socials and events.

Skills Gained:

- Independent novel technical problem solving.
- High dimensional correlated statistical modeling.
- Machine learning, PCA, clustering, sparse methods, Gaussian statistics, graphs and Markov random fields.
- Multi-view geometry and computer vision including feature points, camera matrices, affine approximations, epi-polar geometry and 3D & homogeneous geometry.
- Algorithm design, literature review and academic report writing.

L3 TRL: Data fusion secondment   **9/9/2013 to 6/12/2013**

Three month secondment at L3 TRL, a medium sized subsidiary of L3, specialising in electronic counter measures, network security and spectrum surveillance. Placed in the disruptive technology team.

Goals: To write a white paper on data fusion.

Achievements:

- Gathered requirements from technical and sales teams to formulate the problem and produced a Matlab prototype, report and assisted in the integration into an in development product (report available on www.ziggyjones.com)
- Developed an approach for modelling data sources based loosely on Gaussian statistics in high dimensional space aligned to the gathered requirements and presented findings to ~50 staff.

Skills Gained:

- Multiple hypothesis tracking, Kalman filters and particle filters.
- Multi-dimensional Gaussian statistical modelling.
- Requirements gathering from research and sales staff.

CONSULTANCY EXPERIENCE

ACCENTURE: MANAGEMENT CONSULTANT   **4/8/2008 to 1/10/2011**

Joined as an Analyst and worked initially in MI reporting before working in IT Transformation and Strategy. I was then promoted to a Consultant and worked in Market Risk management.

Business capabilities:

- Market Risk
- Management/Business Information (MI/BI) Reporting
- IT Transformation
- Business Case Management

Skills and responsibilities

- Working closely with clients to define and execute projects
- Working independantly with tight project deadlines and defined deliverables
- Defining processes
- Analysing business information

EDUCATION

1st CLASS MENG ELECTRONIC ENGINEERING AT WARWICK   **1/10/2004 to 30/6/2008**

- Individual project in fibre optic network modelling.
- Group project in modelling a novel fluid flow meter, designed a feedback control system for the magnetic levitation of a mass in a fluid filled pipe in Matlab.

Programming experience (work, study and spare time projects):

- MATLAB - Computer Vision, Machine Learning
- Python - OpenCV, Pandas, SKLearn, SQL, Flask, Pytest
- C/C++ - Change detection, face detection and feature points using OpenCV
- PHP, SQL, Javascript, and HTML5

- EXCEL and VBA development - Automated report generation and data analysis
- Verilog - 1D and 2D image filter buffers used for denoising and corner detection

INTERESTS

Swimming, running, cycling, and reading both fiction and publications such as The Economist and other current affairs news.