

Software Developer

<i>Expertise</i>	Experience with C/JAVA/SQL/MATLAB
<i>Education</i>	M.Sc. (Computer Science), 2011, University of Bristol, UK M.Eng. (Aerospace Engineering), 2009, University of Liverpool, UK
<i>Honors & Awards</i>	QinetiQ prize for best Aerospace Group Project, 2009
<i>Professional Experience</i>	
2011 - Present	<i>Applied Seismology Consultants, Shrewsbury, UK</i> <i>Software Developer</i>

Project Experience

Shape from Shading: Developed a shape from shading algorithm to recover depth information for a scene of known lighting conditions, applied to the footprint of the clouded leopard species. The algorithm focuses on noise control, spatially-linear depth exploration, linear and non-linear integration using gradient vector flow. Developed in Visual Studio 2010 using C.

Robust Aimpoint: Developed a targeting, tracking and guidance algorithm for a cruise missile. Using image processing techniques, specifically *normalized cross correlation* and *affine invariant moments*, to identify the target and continue to track it. The missile used the guidance of law *proportional navigation* to fly autonomously to the target. Developed in Matlab.

Petanque – Group Project: Designed, developed and implemented a new take on the *Petanque* game. Using a combination of servos and slide controls, a launch mechanism was built allowing for precise aiming from user. Images processed from a webcam were used to calculate the score. Developed in C.

Aerospace Group Project: Designed and implemented changes to the aircraft's engine to meet updated aircraft's operational requirements. A test pilot was used to determine the quality of the aircrafts performance before and after changes, based on the new operational requirements. Developed in Matlab, implemented in FlightLab.