



Student: Gary Albert Benson
Course: BSc in Physics (with placement year), University of Hertfordshire
Placement: QinetiQ
Role: Maritime Software Development

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Why did you decide to do a placement?

I was interested in working with QinetiQ in a defence environment and when I was offered the chance to work with sonar, which I hadn't previously studied, it seemed a very interesting opportunity.

What department did you work in?

I worked as a maritime placement student as a part of the Target Echo Strength (TES) team at QinetiQ Winfrith. TES is measured by transmitting an acoustic pulse at a stationary submarine and recording the echo. The levels of the recorded echo and the time of flight give an idea as to what part of the submarine has produced the echo. The team will scan the submarine from all angles with the aim of informing the Royal Navy of its overall acoustic reflectivity.

Describe your role

My role has been software development and testing, along with assisting on trials (at-sea experiments). I have built a propagation loss model in MATLAB which models the path of sound travelling through the water and shows how it is affected by the environment. This helps the TES team know where to position their equipment relative to the submarine when conducting trials.

I have also been testing a specific form of analysis for radiated sound from a moving submarine. In this case the analysis involves a speed-dependent adjustment to account for Doppler shift as the submarine passes a stationary hydrophone.

How did you get the job? Tell us how you went about your job search.

I applied for many placements and was rejected by many, however, I didn't let it deter me. I applied to QinetiQ because I live a two-minute drive from QinetiQ's HQ in Farnborough. The position I applied for was more of an engineering position, however, a week or so later I was phoned by the Early Careers Department and they offered to send my application to the TES team in Winfrith (if I didn't mind relocating).

What would be your top tips for current undergraduates for how to acquire the skills necessary to get on to their chosen career path?

Do not be deterred from applying, even if the role you are applying for isn't necessarily suited towards you, as opportunities like mine can be offered. Apply to as many places as possible and as many teams within those companies. Another tip would be to have a keen interest in what you are applying for. Try and find a role that really interests you and that will be apparent to the employer.

Employer perspective

In the course of his placement, Gary has developed a good understanding of acoustics and learned numerous skills relevant to our business. It's been a good experience in many ways, and we hope to see him again in the future!

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