2013 SUMMER INTERNSHIP ROLE PROFILE

<table>
<thead>
<tr>
<th><strong>Job title</strong></th>
<th>Summer Intern</th>
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<tr>
<td><strong>Business Unit</strong></td>
<td>Shared Services</td>
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<tr>
<td><strong>Function</strong></td>
<td>Advanced Technology Centre, Communications, Networks &amp; Image Analysis Capability</td>
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<td><strong>Hiring manager</strong></td>
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<tr>
<td><strong>Job type</strong></td>
<td>Fixed Term (employed through SEMTA)</td>
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<tr>
<td><strong>Location of Role</strong></td>
<td>Great Baddow (near Chelmsford, Essex)</td>
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**Role profile**

BAE Systems Advanced Technology Centre (ATC) is the research and technology arm of BAE Systems and delivers technology innovation, acquisition and development to the company. With an employee base of world-class scientists and engineers, the ATC is a powerhouse of knowledge and expertise that works in partnership with academia and business organisations to deliver the best solutions to its customers.

We provide research & development, consultancy, specialist manufacturing and technical services for BAE Systems businesses. Additionally, our expertise has helped the UK MOD, US Department of Defense, European Space Agency, UK Sport, universities and other leading innovative organisations achieve their goals.

The **Communications, Networks and Image Analysis Capability** is based in Great Baddow, near Chelmsford, Essex. Examples of our pioneering research work include:

- We help to protect national security through research and development of emerging computer and networking technologies for covert and secure operations
- We analyse and exploit satellite imagery to solve a range of challenging problems. For example the detection of land mines to support their removal and automatic object recognition for military scenarios
- Our world leading radio systems research enables both the exploration of deep space and secure communication in hostile environments
- We investigate and demonstrate emerging security technologies to enable our customers to securely share sensitive information across boundaries and domains

**What you will be doing** (Role Duties and Responsibilities)

As part of the **Communications, Networks and Image Analysis Capability** of the Advanced Technology Centre you will gain experience of working in a world leading research team and contribute to the development of cutting edge technology.

You will likely experience:

- Analysing, developing and evaluating new technologies and working with our research team to propose novel solutions to challenging and stimulating problems
- Using computer science and software engineering skills to develop both demonstrations of future technology and software applications that will be immediately used by our customers
- Developing novel technology demonstrators to support our customers in safeguarding national security
- Meeting with customers and experiencing how our technology makes a tangible difference to the nation’s security

During the course of the Internship you will learn to manage priorities and workload, by both working as an individual and as part of team and learn to communicate effectively within a working environment.

The type of projects we carry out are highly varied but you may gain experience in:

- Algorithm development in C/C++, Java and MATLAB
- Scripting languages such as Perl and Python
- Networking technologies and protocols (e.g. TCP/IP, HTTP)
- Mobile application development

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<th>What we are looking for (Skills and Experience)</th>
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**Qualifications / Skills required:**

- You will be currently studying for a degree in a numerate discipline such as Computer Science, Physics or Mathematics and can demonstrate you have achieved an overall grade of 2:1 in your studies to date

- In addition candidates must have 280 UCAS points

- You must be highly motivated and able to understand new concepts quickly before applying them to solve challenging problems

- You must be able to work independently on your own research projects as well as contribute constructively in a team environment

- Experience in any of the following areas would be an advantage but is not essential as you will learn many of the skills during the placement:
  - Algorithm development in C/C++, Java or MATLAB
  - Experience using scripting languages such as Bash, Perl or Python
  - Experience of computer vision or image analysis techniques
  - Knowledge of networking technologies and protocols (e.g. TCP/IP, HTTP)
  - Knowledge of computer and network security concepts
  - Mobile application development (e.g. Android)