

# AMAAN AKRAM

## YEAR 4 COMPUTER SCIENCE

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### EDUCATION

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**Heriot-Watt University**  
**Edinburgh**  
BSc Computer Science (Software Engineering)  
On track for 2:1

**Sep 2017 - Current**

**Auchmuty High school**  
**Glenrothes**  
Higher: 2A,4B,2C  
National 5: 3A,2B,2C

**Aug 2011 – May 2017**

### MAIN MODULES

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#### Software Development 1,2 & 3

**Year 1**

Used java to learn and develop fundamental skills in programming with an overall focus of object orienting programming.

#### Interactive Systems

Created an app called pass-man, a simple password manager to keep track of all your different passwords. Incorporated very mild encryption. Created in 'app inventor'.

#### Data Structures and Algorithms

**Year 2**

Increased knowledge of programming with more focus in efficiency and speed. 2 coursework; first a spellchecker that uses linked lists to store words and another implementation that uses hash tables, I had to compare the speed and efficiency of both implementations. The second was a Sky Routes program to show optimal routes to get to a given location, implemented using JGraphT java library.

#### Web Programming

Created a fully functioning e-commerce website "Crep Check" using HTML, CSS, JSP and jQuery using AJAX methods to manipulate SQL databases displaying them in real time without refreshing.

#### Programming Languages

Gained knowledge of different languages and their desired use cases. Learned how to program in SML, Python and Prolog.

#### Software Engineering

**Year 3**

Full large-scale group project. Creating the ultimate cross platform smart home application. Using technologies such as Git version control, node.js, Go-Macaron, SQL-lite and XORM. We as a group followed the Kanban software development methodology. The project spanned both semesters. Learn more about what we created on Nacdlow.com.

### Artificial Intelligence and Intelligent agents

Introduction to AI and Intelligent Agents. Created a PDDL domain and problem file to represent a space exploration scenario with specific rules for first coursework. The second coursework required me to create an AI to solve a Tic Tac Toe game and was implemented in java.

### Data Communications & Networking

Learned about the structure of the internet. A greeter understanding of the 7 layers of the OSI model. Simulated different network structures with NS2 and analysed how different structures compare to each other in regards to congestion, speed and efficiency

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|---|-------------------------|
| <ul style="list-style-type: none"><li>- <b>Biologically Inspired computing</b></li><li>- <b>Data Mining &amp; Machine Learning</b></li><li>- <b>Computer Network Security</b></li><li>- <b>Advanced Network Security</b></li><li>- <b>Big Data Management</b></li></ul> | <b>Year 4 (current)</b> |
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### EMPLOYMENT

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| <b>Amazon</b><br>Fulfillment Associate<br>Summer job worked as a warehouse operative. Gained skills in time management and punctuality as Amazon have strict policies in terms of meeting targets and quantity idle time. Gained team building skills as the whole operation is based on a group/team system. Enlightened by the importance of user design within the work force, and lack of update for enterprise-based systems. | <b>Jul 2019 – Sep 2019    Jun 2020 - Jul 2020</b> |
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| <b>Duncan's Hardware</b><br>Retail<br>Small family hardware store based in Leven. Very varied tasks ranging from stacking shelves to repairing phones and watches to serving customers. Gained communication skills from interacting with customers on regular basis. Problem solving is also a big aspect. | <b>Mar 2013 – Present</b> |
|---|---------------------------|

| TECHNICAL SKILLS  | SOFTWARE EXPERIENCE  |
|---|--|
| <ul style="list-style-type: none"><li>- Java</li><li>- C</li><li>- Python</li><li>- Go-Lang</li><li>- Flutter</li><li>- CSS/ SCSS</li><li>- JavaScript/ jQuery</li><li>- HTML</li><li>- Latex</li><li>- UML</li><li>- UI Design</li><li>- Git</li></ul> | <ul style="list-style-type: none"><li>- Linux/ Unix</li><li>- Windows/ WSL</li><li>- Eclipse/ IntelliJ</li><li>- Terminal/ Bash</li><li>- Visual Studio Code</li><li>- Vim</li><li>- Atom</li><li>- NS-2</li><li>- Github/ Gitlab</li><li>- Adobe XD</li></ul> |

References Available on Request