Andrew Andronikou BSc

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A creative BSc (Hons) Games Technology graduate from Coventry University with a good understanding of programming in C++, C# and Python. Possesses excellent time management, mathematics and a rational approach to problem solving, combined with a passion for creating new and interesting content. With a strong interest in AI and gameplay mechanics, bought on by personal enjoyment of action RPGs and many others. Excellent technical skills in a variety of computing areas, with solid communication and team-working skills. UK Citizen with full UK driving license.

TECHNICAL SKILLS

- **Programming** — C++, C#, Python
- **3D Modelling** — 3DS Max, Substance Painter
- **Games Development** — Unity 5, Unreal Engine 4 (including Carla)
- **Operating systems** — Windows, Linux
- **Machine Learning & AI** — Artificial / Convolutional Neural Networks, Object detection, Sematic Segmentation, Reinforcement learning
- **Robotics** — ROS, State Estimation & Localization, Visual Perception, Motion Planning
- **Data & Information Retrieval** — Oracle SQL, CassandraDB, MongoDB, Hadoop, MapReduce
- **Web Development** — HTML, CSS, PHP, JavaScript
- **Mobile Development** — Xcode, Android Studio
- **Adobe Suite** — Fuse, Photoshop, Fireworks

WORK EXPERIANCE

KPIT Technologies Munich, Germany — **October 2018 – August 2019**

Full time Software developer intern. KPIT have been working very closely to BMW to create a fully autonomous car. Exploring new technologies and techniques in robotics, self-driving car stack and simulation to then implement and test machine learning algorithms complying to high quality safe procedures for autonomous cars, before releasing onto public vehicles. Programming languages used: C++, Python.

- **Computer Vision** – Built detection and classification models using Python, TensorFlow, Keras, CV2.
- **Deep learning** – Using distributed Deep learning to train CNN and classify images from large datasets, image pre-processing with Supervised and Reinforcement learning.
- **Localization** – Various algorithms such as EKF, MCL to allow the car to know its position in world space while making use of sensor fusion to further increase accuracy.
- **Carla / Udacity Simulator** – Both simulators used to implement and test the above while undertaking data collection and presenting information using data visualization techniques.

EDUCATION

Coventry University — **September 2016 – May 2020**

BSc Games Technology (First Class Honours)

This course was accredited by British Computer Society, covering a range of modules including:
3D Modelling & Animation (1:1), Games & AI (1:1), 3D Graphics Programming (1:1), Physics for Graphics (1:1).

Course was delivered through a combination of lectures, lab session, tests, individual and group projects, this allowed me to learn valuable skills such as; time management to work to deadlines, version control with various projects, working well within teams while allowing for regular presentations to showcase progress to academics.

Birmingham Metropolitan College Mathew Boulton campus September 2014 – July 2016

Software Development and Games D*D*D*- Full marks were awarding through course including relevant modules such as Developing Computer Games, Object Oriented Programming and Computer Game Design.

Great Barr Secondary School September 2008 – July 2013

10 GCSE's ranging from A*- C including English, Mathematics, Science and ICT

UNIVERSITY PROJECT

Individual project conducted during "Games & AI" January 2020 – April 2020

Was tasked with creating a game which had 2 AI techniques, complimented by other features to make gameplay flow seamlessly. Decided to create an RPG styled game with varying weapon types, enemies, abilities etc. which led the player to upgrade themselves using experience and leveling system. I used the Unity Game Engine in C# to create this project. The two AI techniques used were FSM (including fuzzy logic) and Flocking.

- FSM – States such as; Attacking, Fleeing, Weapon Change etc. were all included, combined with fuzzy logic to allow the AI agents to have a higher level of intelligence. This challenged the player to look for new tactics to stay ahead of the enemies.

- Flocking – Used to have groups of enemies navigating around the environment and would also split off into smaller groups depending on certain conditions

- Advanced features– Included player and enemy levels to allow for progression and varying difficulty, also having weapons and abilities such as; swords, bows, fireball, equip-able for the player and enemies alike. Random enemy spawner out of sight of camera, when enemies are instantiated, they choose a random route around the environment to traverse.

Obtained a 1:1 for this project. Skills develop including core game mechanics & AI, in-depth Nav Mesh, Finite State Machines and important programming practices. Majority of time was spent on programming heavily which improved problem-solving skills and allowed for exploration of new concepts and ideas. Check this is more detail.

INTERESTS & HOBBIES

- Gaming – Has been passionate from a young age and have taken keen interest into computer games, that interest has stayed throughout. Enjoys playing competitively as this encourages to be the best at what is possible. Has taught valuable skills such as strategy, teamwork and often find self; researching and theory crafting complex mechanics to improve own gameplay. As a result, knowledge of the industry has been gained from watching it grow and evolve into what it is today and aim to be a contributing part of that.

- Traveling – Being from a family who have come from various countries and cultures, this has allowed for the opportunity to visit and experience many countries across Europe which has now become a part of oneself. Very much enjoy meeting people, trying new cultures and food. In recent times, time has been spent on hiking in the German, Austrian Alps which is an amazing experience and appreciate the natural beauty of the country.

References available on request