Master of Applied Artificial Intelligence

Company, Team, and Me!

My Details

Name: Michael Christopher
Company Name: RedBack Company
Role title or area: Data Analytic
Target grade: High Distinction

Course Learning Outcomes

GLO1 – Discipline-specific knowledge and capabilities

- *Develop an advanced and integrated knowledge of the technologies of artificial intelligence, including deep learning and reinforcement learning, with detailed knowledge of the application of AI algorithms across a range of domains and applications including computer vision and speech processing.*
- *Design, develop and implement software solutions that incorporate novel applications of artificial intelligence.*
- *Apply advanced knowledge of artificial intelligence to the research and evaluation of AI solutions and provision of specialist advice.*
- *Design artificial intelligence solutions that incorporate safe ethical decision making.*

Your reflection: Using methods like TensorFlow, XGBoost, and Scikit-Learn, I will use my deep knowledge of AI to assist in creating prediction models for the project. By using ethically responsible and data-driven solutions, I hope to improve real-time warning and anomaly detection. I will work with the AI/ML and Backend teams to improve data pipelines and include smart characteristics into the platform while making sure that private health information is used responsibly.

GLO2 – Communication

- *Prepare a range of technical and user-oriented documentation using adequate structure, terminology and context to address technical and non-technical audiences.*
- *Convey information and instructions in a clear, concise and coherent manner using appropriate oral communication techniques and skills for a broad range of audiences.*
- *Imagine, conceive, and represent ideas using IT conventions, modelling languages, and standards to reflect on complex artificial intelligence ideas and processes in an effective manner.*
- *Apply interpersonal skills to lead, proactively assist, contribute to ideas, respect opinions and value contribution made by others when working collaboratively with a wide range of stakeholders.*

Your reflection: I will help create user-focused materials (like dashboard guides) and technical documentation (like model descriptions and data flow diagrams) that effectively explain complex AI procedures. I'll actively offer ideas, participate in frequent team meetings, and make sure that criticism is valued and taken into consideration. I want to interact with technical teams and non-technical stakeholders in a effective way using the right language and visual aids.

GLO3 - Digital literacy

- *Identify, select and use a range of digital technologies and tools to generate, manage and share digital resources associated with advanced artificial intelligence concepts and solutions.*
- *Independently and systematically locate information, evaluate its reliability, and use the information for design, problem solving and research purposes.*
- *Recommend and use appropriate practices and processes to ensure the security, integrity, safety and availability of digital resources.*

Your reflection: I'll manage and distribute AI resources using programs like TensorFlow, GitHub, and cloud storage. In order to increase accuracy of predictions, I want to investigate model optimization strategies, evaluate their dependability, and put them into practice. In order to maintain data integrity and safety, I will also handle sensitive health data according to with cybersecurity best practices.

GLO4 - Critical thinking

- *In assessing complex artificial intelligence scenarios, critically evaluate arguments, hypothesis, systems and proposals to identify basic statements.*
- *In assessing complex artificial intelligence scenarios, locate ambiguity and vagueness in arguments, requirements, and proposals to determine if ideas are reasonable, and identify information that may be contradictory, omitted, or not collected.*
- *In assessing complex artificial intelligence scenarios, apply judgement in evaluating ideas, associated reasoning, and available evidence to arrive at conclusions that are valid.*

Your reflection: I will evaluate the project's predictive models critically, finding out any data or reasoning issues that could compromise accuracy. I'll use solid reasoning to evaluate competing AI techniques in order to choose the best reliable and ethical options for real-time health monitoring, particularly in situations with unclear or contradicting data.

GLO5 - Problem solving

- *Apply expert, specialised technical skills, knowledge and techniques to identify and define complex problems utilising advanced artificial intelligence in a variety of contexts.*
- *Apply expert, specialised technical skills and knowledge in modelling methods and processes to understand problems, handle abstraction and design novel artificial intelligence solutions.*
- *Apply expert, specialised technical skills and knowledge to develop innovative and creative approaches and/or solutions in planning, designing, managing, evaluating and executing complex artificial intelligence projects.*
- *Integrate knowledge of social, safety, legal and cultural aspects to solve problems in complex and contradictory situations.*

Your reflection: By creating AI models that can identify anomalies like falls or abnormal trends, I hope to address challenging issues in this project. I will use modeling and abstraction techniques to create solutions that are suited to user requirements and technical limitations while taking social, legal, and ethical considerations into account when implementing AI in sensitive health contexts.

GLO6 - Self-management

- *Evaluate own knowledge and skills with relation to wider artificial intelligence community and use frameworks of reflection to define and progress professional goals.*
- *Recognise the need, and engage in, independent learning for continual development pf specialist knowledge and skills in artificial intelligence as a computing professional.*
- *Demonstrate the ability to accept responsibility for objectives, and work under broad direction, engaging in the feedback process independently to ensure outcomes are achieved.*

Your reflection: I'll use self-assessment tools and feedback to regularly consider my areas of strength and growth. I'm going to set specific targets for my AI development and actively seek out independent education to broaden my knowledge. In order to complete projects successfully, I try to accept full responsibility for the work I do and respond positively to criticism.

GLO7 - Teamwork

- *Contribute specialist knowledge and skills of artificial intelligence when working within a team, demonstrating high levels of responsibility and accountability.*
- *Engage consistently and professionally in groupware to contribute expert knowledge and skills of artificial intelligence to achieve shared team objectives and outcomes.*
- *Apply strategies to lead and support positive group dynamics, manage conflict and to function effectively as a team member.*

Your reflection: I'll use my AI knowledge to help the group create trustworthy prediction models while maintaining professionalism and responsibility in all group discussions. I'll work with others using common platforms (like GitHub and Slack) and encourage a polite, welcoming team atmosphere by helping others, resolving conflicts peacefully, and cultivating a positive group dynamic.

GLO8 - Global citizenship

- *Apply professional ethics, responsibilities, and norms of professional computing practice.*
- *Demonstrate awareness of regulation and ethical implications of acquisition, use, disclosure and eventual disposal of information.*
- *Engage with global trends and research with concern for societal, health, safety, legal, and cultural issues to effectively manage responsibilities relevant to artificial intelligence in practice.*

Your reflection: I am committed to professional and ethical standards when handling sensitive health data, making sure that data privacy laws and ethical research procedures are followed. In an effort to develop ethical solutions that complement current technological and global health trends, I will take into account the societal, legal, and cultural effects of AI in health monitoring.

SFIA Skills associated with the course

Data Science (DATS)

Your reflection: Using Python tools like Pandas, NumPy, and Seaborn, I will use data science concepts to gather insights from health-related data. In order to support data-driven decision-making, my approach involves cleaning and analyzing wearable device data to guide model development and enhance user monitoring features.

Machine Learning (MLNG)

Your reflection: I will develop and refine machine learning models for health event prediction using tools like TensorFlow, XGBoost, and Scikit-Learn. My approach involves selecting suitable algorithms, tuning hyperparameters, and evaluating model performance to support real-time detection of anomalies like falls or abnormal activity.

Research (RCSH)

Your reflection: To help with feature selection and model creation, I will analyze the literature and investigate recent AI applications in wearable health monitoring. My goal is to critically assess results and incorporate them into the system, making sure that our solutions are based on the most recent studies and industry best practices.

Numerical analysis (NUAN)

Your reflection: I will apply numerical methods to analyse time-series sensor data and evaluate model accuracy using performance metrics such as precision, recall, and F1-score. This will help optimise prediction systems and ensure the reliability of data-driven health monitoring within the Lachesis platform.

My Capstone Goals

Redback Operations' emphasis on creative, socially beneficial projects that combine wearable technology, data analytics, and artificial intelligence is why I decided to join. Project Lachesis particularly appealed to me since it strongly relates to my interests in health technology and applying AI to tackle practical issues.

I think I'll be most useful in the fields of AI/ML and data science, where I can help create and improve predictive models for anomaly detection, health monitoring, and data-driven decision support systems.

I want to show that I can contribute to dashboard visualisation and backend integration in addition to AI and data analytics, making sure the models I assist in developing are effectively included into the system that users interact with.

Through this experience, I hope to deepen my awareness of ethical AI practices, strengthen my teamwork and project communication skills in a multidisciplinary setting, and increase my ability to deploy AI models within real-world software systems.