COMPETENCY	SKILL	SUBSKILL	LEVEL	EVIDENCE
PROFESSIONAL	Communication and literacy	Express information effectively to technical and non-technical audiences.	Expert	**Industry:** Global speaker: 200+ times including 19 public AI presentations. Recognised AI in media expert. **UoEO:** Distinctions on assignments, written and oral. 4 presentations. **ML:** Collaborative Learning (1,2,3 and 8,9,10), Team Project (6), Independent Project (11).
		Documents to aid communication (reports, diagrams, legal descriptions, plans, manuals, charts)	Expert	**Industry:** Extensive internal documents. Expert at PowerPoint presenting. Published articles. **UoEO:** Trained in creating statistical graphs in R, Python and Excel. **ML:** Team Project (6), Independent Project (11).
	Commercial awareness	Keep current with industry tools, and emerging technology	Expert	**Industry:** 30 years' industry experience. 19 AI speaking engagements since 2023. Read AI news, newsletters. **ML:** Collaborative Learning (8,9,10) on LLMs and GPT, CNN Object Recognition industry application (11).
		Share productivity tool knowledge	Proficient	**Industry:** Share on LinkedIn and internally any expertise I've gained. **UoEO/ML:** Created WhatsApp groups for students to share questions and insights.
		Professional organisations	Proficient	**Industry:** British Academy of Film and Television Arts (BAFTA). Former: ACM SIGGRAPH, BCS MBCS.
		Quality, customer satisfaction, fair application of policies.	Expert	**Industry:** As Chief Technology Officer (CTO) launched products, overseeing quality assurance and customer care.
		Ethical codes of conduct	Proficient	**Industry:** Google Responsible AI training. Investigating CAI, C2PA, IPTC authenticity / provenance. **ML:** Research in ANN (8), Collaborative Learning (8,9,10), CNN Model Activity (9).
	Subject understanding	Computer Science understanding.	Expert	**Industry:** 30 years' media technology industry. Innovated early video streaming for Virgin Media/Channel 4. **UoEO:** Distinctions on assignments.
	Critical thinking and analysis	Inconsistencies, gaps, additional information.	Expert	**Industry:** 30 years' media technology industry as innovator. **UoEO:** Distinctions on assignments. **ML:** Collaborative Learning (1,2,3 and 8,9,10), Team Project (6), Independent Project (11), Formatives.
	Research	Explore complex real-world computing problems	Expert	**Industry:** 30+ years' industry innovation expertise. **ML:** Collaborative Learning (1,2,3 and 8,9,10), Team Project (6), Independent Project (11), Formatives (5,8,9,12).
	Time management	Manage time.	Expert	**Industry:** Project managed and launched successful products. PRINCE-2 certified. **ML:** Do not procrastinate. Early submissions. Distinctions.
LEGAL & ETHICAL	Ethical awareness	Comply with laws	Expert	**Industry:** 30 years' media technology industry. Launched legally compliant services.
	Ethical awareness	Privacy and confidentiality	Expert	**Industry:** Numerous Non-Disclosure Agreements (NDA).
REFLECTION	Critical reflection		Proficient	**Industry:** Public speaking on case studies, including International Broadcasting Convention paper / presentation. **UoEO:** Distinctions in academia. Created eight reflective essays to date. **ML:** Reflection (12), e-Portfolio (12)
	Emotional Intelligence		Proficient	**Personal:** Certified Neurolinguistic Programming. Trained Emotional Intelligence, coaching.
SOCIAL (CULTURE)	Cultural Awareness	Social (Community) Responsibility	Expert	**UoEO:** Student Rep. Student WhatsApp.
SOCIAL (TEAMWORK)	Interpersonal	Collaborate effectively in diverse teams to achieve team goals.	Expert	**UoEO:** Collaborative Discussions. Team WhatsApp / organiser / chair. Student rep. Cohort WhatsApp. **ML:** Collaborative Learning (1,2,3 and 8,9,10), Team Project (6).
	Academic teamwork	Teamwork to meet objectives.	Expert	**ML:** Collaborative Learning (1,2,3 and 8,9,10), Team Project (6).
	Feedback	Give and receive constructive feedback	Expert	**ML:** Collaborative Learning (1,2,3 and 8,9,10), Team Project (6). Accept and analyse constructive feedback.
	Leadership	Leadership and team building.	Expert	**Industry:** 20+ years Chief Technical Officer (CTO) leadership. Led global teams (APAC, EMEA, Americas). **ML:** Led Team Project (6).
SOCIAL (STRATEGY)	Creativity	Create stakeholder sustainability.	Expert	**Industry:** 30 years' industry. Sustainability in AI for startup. Multi-stakeholder legal deals.
	Decision-making	Using multiple data sources.	Expert	30 years' industry experience. Decide tooling and approach for web scraping and ontologies. Research proposal planning.
	Entrepreneurial		Expert	20+ years' startup / SME experience. Came up with novel educational solution for libraries. Novel research proposal.
	Initiative		Expert	30 years' industry. MSc AI. Addressing issues led to student rep. WhatsApp groups for students.
	Problem-solving		Expert	30 years' industry. Web scraping code, ontology classes, health dataset results, LLM/M&E research proposal.
APPLICATION (SUBJECT)	Global citizen	Other's perspectives.	Expert	**Personal:** International with two passports. Lived in two countries. **Industry:** Led global role (APAC, Americas, EMEA). **ML:** Collaborative Learning (1,2,3 and 8,9,10), Team Project (6).
	Teamwork	Constructively work with viewpoint differences.	Expert	**ML:** Collaborative Learning (1,2,3 and 8,9,10), Team Project (6). Accept and analyse constructive feedback.
	Community	Community activities.	Proficient	**Industry:** BAFTA
APPLICATION (IMPLEMENTATION)	WEKA Machine Learning		Trained	**UoEO:** Evaluated Kaggle banking churn. K-Nearest Neighbours, Decision Tree, SVM, Random Forest.
	Intelligent agent		Trained	**UoEO:** Simple reflex agent web scraper to scrape citation data from arXiv, search and store.
	Ontology		Trained	**UoEO:** Simple library ontology incorporating age-appropriate genre search and new releases for books.
	Statistical analysis		Trained	**UoEO:** Descriptive and inferential statistics and literature for Health Survey for England 2011 data.
	k-means clustering		Trained	**ML:** Analysed Airbnb NYC 2019 dataset to determine revenue optimisation strategies (6).
	CNN object recognition		Trained	**ML:** Five CNN models for object recognition on CIFAR-10 dataset (11).
DIGITAL	Microsoft Excel		Proficient	**Industry:** Used for 20+ years. **UoEO:** Trained on statistical analysis and charts.
	Microsoft Word		Expert	**Industry:** Regularly write for industry, publication. **Personal:** Attempt fiction. **UoEO:** Essays.
	Microsoft PowerPoint		Expert	**Industry:** Global speaker (200+ times), with perhaps half using PowerPoint. **UoEO:** Presentations.
	Virtual Learning Environment		Proficient	**UoEO:** Use Moodle for courses.
TECHNOLOGIES	Constituency-based parse trees		Aware	**UoEO:** Parse tree for phrases homework.
	CSV		Trained	**UoEO:** Used as data input (R statistical tests) or output (Python agent).
	Excel		Trained	**UoEO:** Trained on statistical analysis and charts. **ML:** Used for Team Project (6) analysis.
	GitHub		Proficient	**UoEO:** Using GitHub repositories for coding and e-Portfolio. **ML:** For team and individual projects.
	Google Colab		Proficient	**ML:** Python notebook environment.
	KQML / KIF		Aware	**UoEO:** Agent dialogue homework.
	JASP		Aware	**UoEO:** Used for double checking R descriptive and inferential statistics and exploring SPSS data.
	Markup		Proficient	**UoEO:** Wrote README for simple reflex agent. README for e-Portfolio. **ML:** READMEs for all assignments.
	Microsoft Visual Studio Code		Trained	**UoEO:** Use for coding HTML, CSS, Python, Markup, and unit tests with PyTest. **ML:** e-Portfolio (12)
	Prolog		Aware	**UoEO:** Coded member, subset and proper subset homework validation.
	Protégé OWL2		Trained	**UoEO:** Wrote library ontology with age-appropriate genre search and new releases for books.
	Protégé plugins		Trained	**UoEO:** Pellet reasoner and SPARQL Query language.
	Python		Trained	**UoEO:** Wrote simple reflex agent web scraper. **ML:** All coding assignments
	Python libraries		Trained	**UoEO:** Scrapy, Requests, Beautiful Soup 4, pandas **ML:** folium, GeoPandas, Matplotlib, missingno, NumPy, seaborn, SciPy, scikit-learn, shapely, TensorFlow (keras)
	PyTest		Trained	**UoEO:** Simple reflex agent web scraper unit test.
	R		Trained	**UoEO:** Programmed descriptive and inferential statistics, including graphs and statistical tests for various data.
	RStudio		Trained	**UoEO:** Used for coding and exploring R data, results and graphs.
	SPSS		Trained	**UoEO:** Used as data input (R statistical tests).
	WEKA		Trained	**UoEO:** Machine learning: KNN, Decision Tree, SVM, Random Forest for Kaggle banking churn data.
MACHINE LEARNING	Artificial Neural Networks (ANNs)		Trained	**ML:** Formative (7, 8, 9), Collaborative Learning (8,9,10)
	Correlation and regression		Trained	**ML:** Formative (3, 4)
	Convolutional Neural Networks (CNNs)		Trained	**ML:** Formative (9, 10), Individual project (11) pooling, ReLU, Softmax
	k-Means clustering		Trained	**ML:** Formative (5, 6), Team Project (6)
	Model performance measurement		Trained	**ML:** Formative (11), Individual project (11) confusion matrix, F1-score, precision, recall, ROC AUC, R-squared
NUMERACY	First Order Logic		Trained	**UoEO:** Created 7 FOL competency questions for ontology.
	Jaccard Coefficient and Distance		Trained	**ML:** Jaccard coefficienet and distance assignment (5)
	Set Theory / Truth Tables / Logic		Aware	**UoEO:** Homework for sets, truth tables, crossing problem.
	Statistical analysis (Excel)		Trained	**UOEO:** Descriptive analytics, hypothesis testing (t-test), bar chart, and histogram. Statistics Worksheets.
	Statistical analysis (R)		Trained	**UoEO:** Descriptive, inferential, probabilities, hypothesis, parametric, non-parametric, and regression.
METHODOLOGIES	CRISP-DM		Trained	**UoEO:** Used for WEKA Kaggle banking churn dataset analysis. **ML:** Team Project (6)
	Exploratory Data Analysis		Trained	**ML:** Team Project (6), Independent Project (11), Formatives.
	Gruninger and Fox		Trained	**UoEO:** Used for ontology.
	Interpretivist exploratory inductive		Aware	**UoEO:** Investigated research methodologies for RMPP Research Proposal.
	Noy and McGuinness		Trained	**UoEO:** Used seven step methodology for library ontology.
	PRINCE2 Agile		Proficient	**Industry:** Used PRINCE2 and Agile and combined. **UoEO:** Applied to simple reflex agent web scraper.
	PRISMA		Aware	**UoEO:** Used part of for RMPP Research Proposal literature review.