

PROJECT BRIEF

Anatomy of an AI System

Making the hidden infrastructures of artificial intelligence visible in Second Life

Mode Collaborative team project with individual reflection

Environment Second Life

Duration Ten teaching weeks plus a short reflective submission period

Assessment 200 marks in total

Project focus

Your team will design, build, test and present an explorable Second Life experience that makes part of the hidden anatomy of an AI system visible. The experience must be grounded in Kate Crawford and Vladan Joler's [Anatomy of an AI System](https://anatomyof.ai/) (<https://anatomyof.ai/>) and must connect material resources, human labour and data rather than presenting AI as software alone.

The completed work should help a visitor trace how an apparently simple AI interaction depends on planetary extraction, production and logistics, physical and digital infrastructure, paid and unpaid work, data collection and training, and eventual disposal.

Project rationale

Crawford and Joler use the Amazon Echo and Alexa interaction as an anatomical map of a much larger system. A short voice command activates interlaced chains of resource extraction, human labour and algorithmic processing across mining, logistics, distribution, data processing, prediction and optimisation. Their exploded view follows one device through birth, life and death and identifies three central extractive processes required to operate a large scale AI system: material resources, human labour and data.

This project asks you to select a part of that critical map and translate into a three dimensional, social and interactive learning experience. Your purpose is not to reproduce the publication as decoration or to make a generic display about the benefits and risks of AI. You must interpret a defined part of its argument, show relationships that are usually obscured, and give visitors a way to encounter those relationships through space, narrative, interaction or simulation.

Learning objectives

By the end of the project, you should be able to:

1. Explain how an AI system depends on material resources, human labour and data across its lifecycle.
2. Use key ideas from Crawford and Joler accurately, including extraction, hidden labour, training data, infrastructure, birth, life and death.

3. Design and build a focused Second Life experience that makes one part of the system understandable.
4. Work effectively in a team using agreed roles, regular communication and shared decisions.
5. Present the team's work and reflect on teamwork and virtual activity.

The central project question

How can an immersive virtual environment help a visitor see the material resources, human labour and data extraction that make an everyday AI system possible?

Required intellectual framework

Every project must connect the publication's three extractive processes: *Material Resources; Human Labour; and Data*. Teams may emphasise one process, but the visitor must be able to see how it depends on and affects the other two. The lifecycle of birth, life and death provides a second organising structure.

Lens	Questions your build may investigate
Material resources	Which minerals, components, energy systems, cables, buildings and transport networks make the device and service possible? Where do extraction, pollution, hazards and waste occur?
Human labour	Whose work is visible or hidden? Consider mines, assembly, shipping, warehouses, data centres, maintenance, outsourced programming, crowdwork, content or data labelling, and unpaid user labour.
Data	What is collected, inferred, labelled, stored and used for training? How do user interactions become inputs to a system, and who controls the model or value produced?
Birth, life and death	How do extraction and manufacture lead into circulation and use? What infrastructure sustains operation? Where do devices and materials go when discarded?

Project scope

Do not attempt to represent the entire map. Choose one pathway, place, relationship or moment and connect it to the larger system. Your build should contain three to five main scenes or interactions. A small, clear experience is preferable to a large unfinished one.

Project progression

Phase 1 Research and ideation

Weeks 2 and 3

Read the assigned sections of [Anatomy of an AI System](https://anatomyof.ai/) (<https://anatomyof.ai/>) and inspect its exploded view. Agree a specific route through the system and identify the visitor experience you want to create. Your research must begin with the publication; carefully chosen supporting sources may add current or local context.

Your team proposal must include:

- A working title and a one sentence project question.
- The selected lifecycle stages, locations, infrastructures or forms of work.
- A concept map showing material resources, human labour and data and the connections among them.
- A simple visitor journey or storyboard showing the three to five main scenes or interactions.
- A short source list and a practical plan covering team roles and the main Second Life tasks.

Phase 2 Virtual design and construction

Weeks 4 to 9

Build the experience in your allocated Second Life area. Translate evidence into spatial relationships and interactions. Labels and information panels may support the work, but they should not carry the whole argument. The layout, sequence, scale, sound, movement, objects and scripted responses should help visitors understand the system.

During this phase, teams should:

- Create a working spatial plan and low fidelity prototype before detailed construction.
- Add brief in world citations and include a complete source list with the final submission.
- Use design and interaction to distinguish visible consumer experience from hidden infrastructure and labour.
- Show connections across locations and scales rather than isolating each scene as a separate fact.
- Test the visitor route with classmates, record what is confusing or inaccessible, and revise the build.
- Keep a short shared record of important decisions, contributions and problems.

Phase 3 Presentation and reflection

Weeks 10 and 11 plus the reflective submission period

Teams will hold a technical rehearsal and then host a live visit in Second Life for classmates and invited guests. Each presentation must orient the audience, explain the chosen pathway through the AI system, allow time for exploration, and answer questions about the evidence and design choices.

Each team will:

- Complete a dry run and visitor test in Week 9.
- Present and host the finished experience in Week 10.
- Submit a short narrated video tour that connects the build directly to the publication's argument.
- Submit the source list and short team record.
- Take part in peer critique and respond to questions about omissions, simplifications and design limits.

After the team presentation, each student will submit an individual reflective report. The report should analyse specific experiences of teamwork and virtual activity. It should use evidence from the project log and explain how the student's understanding or practice changed.

Possible Second Life approaches

You may use one format or combine formats. The format should serve the argument and visitor journey rather than act as a theme added after the research.

Approach	Possible use
Exploded system map	A walkable network in which visitors follow materials, labour and data between a small number of linked sites.
Lifecycle journey	A guided route from extraction and manufacture through use and infrastructure to disposal, with the visitor carrying or tracking one component, command or data trace.
Paired visible and hidden spaces	A familiar home interface is placed beside or above the mines, factories, cables, warehouses, data centres and workers it normally conceals.
Role based simulation	Visitors enter as users, workers, managers or system operators. Their choices reveal unequal access to information, risk, control and value.
Data flow experience	A voice command, click, image or profile moves through collection, classification, storage, training and prediction, showing what is inferred and who benefits.

Examples of suitable pathways

- Lithium or another component from extraction to battery, device use and disposal.
- A simple voice command from the home through networks and data infrastructure to an action and a new training signal.
- The labour chain linking mining, assembly, shipping, warehousing, data centre maintenance, crowdwork and user activity.
- The contrast between the small visible interface and the energy, buildings, cables and network services required to sustain it.
- The creation of a training dataset through capture, tagging and labelling, including low paid or unpaid work and the social assumptions embedded in categories.

Critical and ethical expectations

The publication examines extraction, opacity and unequal power. Your project should preserve that critical framing. Avoid presenting affected places or workers as scenery, reducing complex regions to a single story, or turning environmental and labour harms into spectacle. Explain the basis of factual claims, identify significant gaps, and state when a scene is a designed interpretation rather than a literal reconstruction.

If you collect visitor responses, voice, images or recordings, tell participants what will be captured and how it will be used. Use only media and assets that your team has permission to use. Design the route so that visitors can participate without needing unusually fast movement, precise controls or continuous audio.

Tools and skills developed

- Second Life building, object permissions, basic scripting, avatar communication and event hosting.
- Critical reading, systems mapping, evidence selection and source citation.
- Spatial storytelling, interaction design, visitor orientation and accessible communication.
- Collaborative planning, role negotiation, shared documentation and constructive peer feedback.

- Critical reflection on automation, infrastructure, digital labour, data extraction and virtual representation.

Assessment

The team project is worth 160 marks and the individual reflective report is worth 40 marks. The combined total of 200 marks is divided by two to produce the final percentage.

Component	Marks	What will be assessed
Communication	40	The visitor journey and presentation communicate the selected anatomy clearly to the intended audience. Spoken, written, spatial and interactive elements support one another.
Content	40	The project uses Anatomy of an AI System accurately and connects material resources, human labour and data across an appropriate lifecycle or infrastructure pathway.
Tools	40	Second Life and supporting tools are used purposefully to create spatial meaning, interaction, reliability and audience engagement. Technical choices suit the concept.
Teamwork	40	The team establishes roles, communicates regularly, coordinates dependencies, documents contributions and responds constructively to testing and problems.
Individual reflective report	40	The report (1,200 words) analyses the student's learning about teamwork and virtual activity using specific project evidence, critical reflection and a clear account of personal contribution.
Total	200	The total is divided by two for the final percentage.

Performance descriptors for the team project

Criterion	High performance	Developing performance	Limited performance
Communication	Visitors can follow the pathway, understand the main claim and connect the experience to the source. Presentation and hosting are controlled and responsive.	The main topic is understandable, but parts of the route, explanation or presentation are uneven or depend heavily on verbal clarification.	The purpose or sequence is difficult to follow. Claims, instructions or presentation do not give visitors enough orientation.
Content	Claims are accurate, cited and critically framed. All three extractive processes are connected through a focused pathway with meaningful attention to power, opacity and lifecycle.	The source is used and the three processes appear, but connections, evidence or critical interpretation are inconsistent.	Content is generic, weakly sourced or materially misrepresents the publication. Themes appear as disconnected facts.

Criterion	High performance	Developing performance	Limited performance
Tools	Spatial, visual and scripted choices materially improve understanding. The build is coherent, tested and reliable for the intended visit.	The build functions and includes purposeful elements, but interaction, polish or testing is inconsistent.	Tools are used minimally or without a clear relationship to the argument. Technical problems significantly interrupt the experience.
Teamwork	Roles and dependencies are managed transparently. Records show sustained participation, shared decisions, adaptation and constructive handling of problems.	Most tasks are completed, but coordination, documentation, workload balance or response to feedback is uneven.	The team shows weak coordination, incomplete records, unresolved workload problems or limited evidence of collaborative practice.

Individual reflective report guidance

The reflective report should analyse your own contribution and learning rather than retell every week. Use two or three specific examples from the project. The report should be 1,200 words.

A strong report will:

- Explain your contribution with clear examples.
- Discuss one teamwork success or difficulty and how you responded.
- Discuss one design or technical decision and its effect on visitors.
- Identify one change you would make in a future team project.

Deliverables

Stage	Deliverable	Minimum contents
Phase 1	Team proposal	Project question, concept map, short source list, visitor journey, team roles and task plan.
Phase 2	Prototype review	Navigable prototype, sample interaction, draft citations, testing questions and updated risk list.
Phase 3	Second Life experience	Completed team build prepared for a live hosted visit.
Phase 3	Presentation and video tour	A live introduction and facilitated visit, followed by a concise narrated record of the finished experience.
Phase 3	Source list and team record	Final references, brief contribution record, asset credits and access instructions.
Individual	Reflective report	Critical analysis of personal learning about teamwork and virtual activity (word count 1,200) and following submission instructions.

Semester schedule

Week	Focus	Milestone
1	Project launch and Second Life orientation	Teams formed; shared communication space and project log established.
2	Close reading and systems mapping	Initial map of material resources, human labour and data.
3	Scope, evidence and ideation	Team proposal submitted or presented for approval.
4	Visitor journey and spatial prototype	Low fidelity layout and first interaction tested.
5	Core construction	Main route, scenes and information architecture in place.
6	Interaction and evidence	Scripts or interactive elements working; draft citations added.
7	Integration	Connections among the three extractive processes are visible and navigable.
8	Peer testing and revision	Prototype review completed; feedback and actions recorded.
9	Accessibility, reliability and rehearsal	Technical dry run and final corrections.
10	Live presentation and visitor session	Final team build, presentation, video tour and evidence pack submitted according to module instructions.
After Week 10	Individual reflection	Reflective report submitted on the date confirmed by the lecturer.

Submission information

Exact submission dates, times, file naming rules, word counts, video length and submission location will be confirmed by the lecturer in the module schedule. The week-based milestones above should be used for team planning until those details are issued.

30 September: *Project briefing*

25 November: *Dry run presentation by student teams*

02 December: *Final presentation by student teams*

11 January: *Individual reflective report*

Source and citation requirements

The required intellectual source is Kate Crawford and Vladan Joler, [*Anatomy of an AI System*](#): *The Amazon Echo as an Anatomical Map of Human Labor, Data and Planetary Resources*, published by SHARE Lab and

the AI Now Institute in 2018 (<https://anatomyof.ai/>). Begin with the assigned publication and its map. Cite it wherever your project draws on its concepts, claims or visual organisation.

Supporting sources should be selected for a clear purpose, such as verifying a material process, adding local context or updating a factual claim. Keep full publication details in the team evidence pack and use brief readable citations inside the Second Life experience.