GLASGOW COLLEGE, UESTC & GLASGOW COLLEGE HAINAN, UESTC
Final year individual
PROJECT RISK ASSESSMENT

Student Name:	Letian Xie
Student UoG & UESTC IDs:	2959471 / 2023300901028
Project Title:	Smart Charging Scheduling for Cost and Peak Reduction
Supervisor (1st) Name:	Dr Amer Ghias

The supervisor should think ahead and set out a work plan for the student. All potential hazards should be identified and necessary control measures made clear to the student. This risk assessment must be signed by the supervisor and the student, before work begins.

WORK ACTIVITY

Please provide a description of the project plan:

Develop and test an hourly EV charging scheduler in Python on an existing computer.
Use public charging data, published tariff documents and explicitly labelled synthetic sessions.
Compare immediate charging, a TOU heuristic and a constrained linear programme.
Export CSV schedules and cost/peak summaries to SP4 and SP5 for software integration.
Initial scope excludes charger control, electrical construction, batteries and laboratory testing.
No questionnaires, recruitment or human testing are involved. Review scope changes first.

HAZARDS

Please identify ALL significant hazards associated with the project e.g. electrical, chemical, biological, mechanical etc. (use separate sheet if necessary):

Display-screen work: eye strain and musculoskeletal discomfort; adjust workstation and take breaks.

Computer equipment: overheating or damaged leads; use approved power supplies and ventilation.

Trip hazards: route cables safely and keep the workspace clear; no exposed electrical work.

Data/code loss: version control and separate backups; keep sensitive files out of public commits.

Malicious or invalid input: validate files and units; record hashes; do not run untrusted scripts.

Incorrect cost/carbon claims: verify tariffs, timezones and service equality; disclose assumptions.

No chemical, biological or mechanical experiment is planned under the present software scope.

TRAINING

Will the student receive relevant safety training? [x] ***Yes*** [ ] ***No***

Details of Training:

Planned: display-screen/workstation guidance, safe equipment use, secure data handling and scope review.

Provider: supervisor / university guidance. Completion and adequacy to be confirmed with supervisor.

Who will provide Training:

Is the training adequate to control all hazards that have been identified? [x] ***Yes*** [ ] ***No***

COSHH

Will the COSHH regulations apply? [ ] ***Yes*** [x] ***No***

If Yes, please detail all COSHH assessments the student is required to read:

Response: No. No hazardous substances are used in the proposed software-only activity.

SUPERVISION

Will the student be supervised at all times? [ ] ***Yes*** [x] ***No***

If Yes, please name people who will provide supervision:

Response: No continuous supervision is proposed for routine computer work. Academic supervisor: Dr Amer Ghias.

Escalate any change to hardware work or participant involvement before starting it.

CONCLUSION

Are you satisfied that risks are adequately controlled? ☒ ***Yes*** ☐ ***No*** ***If No, what further measures will be taken to reduce risk to an acceptable level?*** ***(e.g. written scheme of work, physical controls, engineered solutions etc.)*** Supervisor to confirm the controls and final Yes/No decision. No physical experiments or live charging control are authorised by this software plan.

Ethical Gateway Questions (Please answer the following questions.)

Does the study involve vulnerable participants or those unable to give informed consent? *(e.g. children, people with learning disabilities, your own students)*	Yes [ ] No [X]
Does the study require permission of a gatekeeper for access to participants? *(e.g. schools, self-help groups, residential homes, hospitals)*	Yes [ ] No [X]
Is it necessary for participants to be involved without consent? *(e.g. covert observation in non-public places)*	Yes [ ] No [X]
Does the study involve sensitive topics? *(e.g. obtaining information about sexual activity, substance abuse)*	Yes [ ] No [X]
Is blood, tissue samples or any other substances be taken from participants? *(e.g. blood, urine, stools, skin)*	Yes [ ] No [X]
Does the study involve intrusive interventions? *(e.g. The administration of drugs, hypnosis, physical exercise)*	Yes [ ] No [X]
Are financial or other inducements be offered to participants? *(With the exception reasonable expenses or small tokens of appreciation)*	Yes [ ] No [X]
Does the study investigate any aspect of illegal activity? *(e.g. drugs, crime, underage alcohol consumption or sexual activity)*	Yes [ ] No [X]
Will work reveal personally attributable confidential information (written, audio or video), or cause undue distress, degrade personal dignity, or infringe human rights? *(eg. Show characteristics of someone's personality, cause distressful emotions, participant will need to be stressed beyond what is considered normal for them, contacting people under threatening circumstances)*	Yes [ ] No [X]

Does the work involve, environmental issues? *(e.g. Relates to real life environmental judgements, such as climate change, species and habitat loss, and pollution.)*	Yes [ ] No [X]
Will the work present ethical problems for tutors, or the university, or participating companies or organisations? *(eg Will the work infringe intellectual property rights.)*	Yes [ ] No [X]
Are (non-human) animals involved with the work? *(e.g. Might the work inflict physical or psychological cruelty, pain, disfigurement or unnecessary restraint)*	Yes [ ] No [X]

If the answer to any of the ethical gateway questions above is "Yes", or if there are any other significant ethical issues, then further ethical consideration is required.

In any proposal involving human participants clear explanation of how informed consent will be obtained, how confidentiality will be observed, how the nature of research and the means of dissemination of the outcomes will be communicated to the participants must be provided.

Summarise below the ethical issues involved in the proposal and how these will be addressed.

Summary of Ethical Issues

No significant ethical issues arise. The work is software simulation only, using public aggregate data and labelled synthetic sessions; it makes no real-life environmental judgement and involves no pollution, habitat or species impact. Schedules are reported as cost and peak-demand figures, not as emissions or environmental advice. No participants, questionnaires, human tests, animals or physical charger experiments are involved. Do not disclose raw user IDs, re-identify users or redistribute restricted material. Cite sources and verify licences. Reassess with the supervisor before any change in scope.

Signed (student): 谢乐天	Date: 10.27
Signed (1st Supervisor):	Date: 10.27