

Project Description for R&D Internship

Job Title: Intern: Software development for a 3D glare assessment tool for PV deployment in highdensity urban environments

Job description: We are presently seeking students enrolled in diploma, bachelor's, or master's programs, who possess software engineering expertise, to aid in the development of a web-based glare assessment tool for urban solar PV systems, utilizing a 3D user interface.

Project description: To further enhance the solarisation of Singapore, smart planning is required to optimise PV deployment. In the densely built-up urban context, glare hazard from PV installations to traffic participants and to neighbouring buildings is a concern that has become increasingly important for city planners and residents. Typical commercially available glare assessment tools assume a direct line-of-sight between the sun and the PV modules and/or the PV modules and the observer. However, in cities this is rarely the case as there are many obstructions perceivable, be it other buildings or infrastructures. Therefore, a comprehensive glare assessment tool for the complex analysis of PV deployment is needed for densely built-up urban areas.

Competencies gained during internship program:

- 1. Hands-on project experience in developing a web-based portal utilizing cloud computing and implementing a 3D user interface.
- 2. Acquired knowledge pertinent to glare analysis of PV integration within urban environments

Skill & requirements:

- 1. Currently enrolled in or recently graduated from a diploma, bachelor's, or master's program related to software engineering or computer science.
- 2. Proficiency in Python, Java, and JavaScript programming languages.
- 3. Strong ability in effective time management.
- 4. Preferred internship duration is 6 months or longer.

Interested applicants to kindly submit CV or Portfolio to Soe Pyae (soepyae@nus.edu.sg) and Dr Sun Huixuan (sersunh@nus.edu.sg) for review.





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