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Downloaded On: Dec. 23, 2025 6:14pm Posted Dec. 23, 2025, set to expire May 6, 2026

Job Title Postdoctoral Fellow (Computer vision, machine

learning, and/or robotics for infrastructure monitoring)

Department School of Civil and Environmental Engineering

Institution Nanyang Technological University

Singapore, , Singapore

Date Posted Dec. 23, 2025

Application Deadline Open untill filled

Position Start Date Available Immediately

Job Categories Research Scientist/Associate

Post-Doc

Academic Field(s) Electrical and/or Electronics

Computer Engineering

Computer Science

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Computer-vision--machine-learning--and-or-robotics-

for-infrastructure-monitoring-and-construction-

automation-_R00022959

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Job Description

The School of Civil and Environmental Engineering (CEE) at Nanyang Technological University (NTU), Singapore, is a leading school for Sustainable Built Environment. The School plays an integral role in spearheading tertiary education, advancing research innovations and providing professional services in a number of key disciplines in Civil and Environmental Engineering and Maritime Studies fields, with



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the objective of contributing to the technological and economic advancement of Singapore and beyond. The School's mission in research is to achieve excellence by providing a conducive and intellectually stimulating environment to enable high quality work in strategic directions that are of significant impact to industry, science and technology.

We are looking for a Postdoctoral Research Fellow to advance research in computer vision, machine learning, and/or robotics for the digitalization, monitoring, and automation of civil infrastructure. The role will focus on developing innovative methodologies and integrated systems that support autonomous inspection, damage assessment, progress monitoring, and construction automation, while contributing to the broader research vision and long-term objectives of the research group.

Key Responsibilities:

- Conduct research in CV/ML/robotics for infrastructure monitoring and automation.
- Develop algorithms and/or systems for sensing, perception, and robotic applications.
- Contribute to digital twin methodologies and predictive modelling.
- Execute experiments and deployments in laboratory and field environments.
- Publish scientific outputs and participate in grant development.
- Support students and collaborate with research partners.
- Contribute to the group's long-term research strategy.

Job Requirements:

PhD (for Research Fellow and above equivalent) qualification in a relevant domain such as computer vision, machine learning, robotics, civil engineering, mechanical engineering,



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electrical/computer engineering, or a related field.

- Relevant research experience, including technical hands-on experience in areas such as computer vision, deep learning, multi-modal sensing, robotics, structural health monitoring, or digital twin technologies. (Fresh PhD graduates are welcome.)
- Familiarity with AI-based perception, robotic systems, sensing technologies, or physics-informed modelling for infrastructure monitoring.
- Good English written and oral communication skills (for publications, documentation, and presentations) essential for data analysis and communication with stakeholders
- Proficiency in hard skills, such as programming (Python, C++), machine learning frameworks (PyTorch, TensorFlow), robotics tools (ROS), simulation environments, and analytical/numerical modelling.
- Competent in soft skills, including the ability to work independently, problem-solve creatively, and develop research solutions under timelines; excellent organizational skills and attention to detail.
- Interpersonal skills, including the ability to collaborate effectively within a multidisciplinary research environment and contribute to team-driven projects.

We regret to inform that only shortlisted candidates will be notified.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact



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