# Opportunities available in applied computer vision and deep learning!

Do you have experience with applied computer vision techniques such as image segmentation? The Salk Institute for Biological Studies (https://salk.edu) is seeking to recruit talented researchers and software engineers to **help us combat climate change through the use of artificial intelligence**!
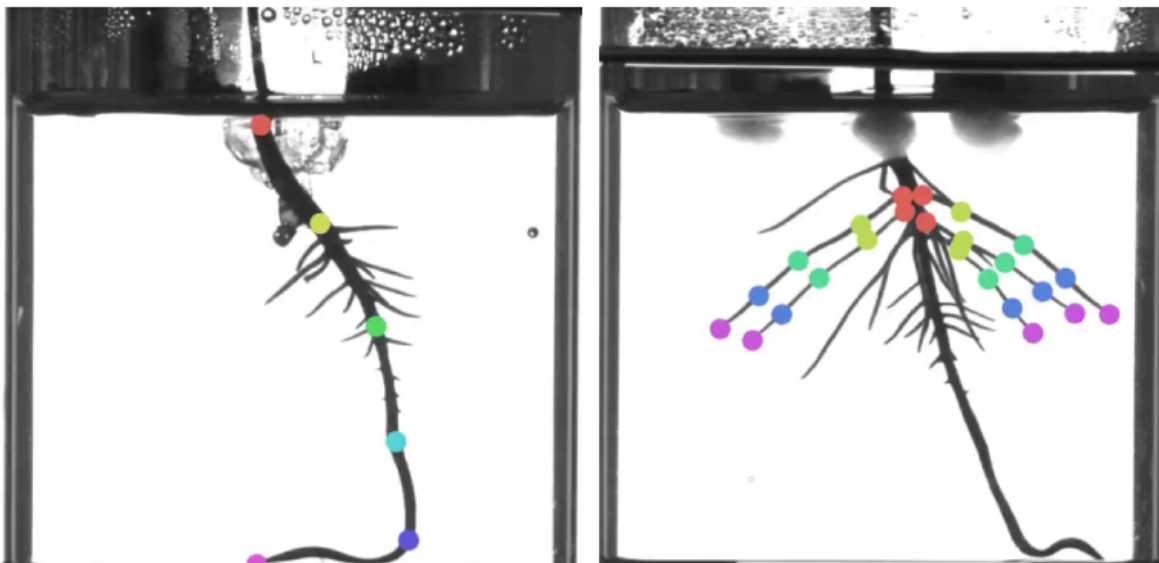
We are looking for applicants with a **background in computer vision and deep learning** to work on a project aimed at automating plant root system phenotyping using machine learning. This tool will be DIRECTLY applied to large-scale datasets to inform selection of plant strains that maximize carbon sequestration in **real world field experiments**.

This project is a collaborative effort across multiple groups at Salk, including Wolfgang Busch (https://busch.salk.edu) and Talmo Pereira (https://talmolab.org). The applicant would also have opportunities to get involved in multiple computational projects across the Harnessing Plants Initiative (https://www.salk.edu/harnessing-plants-initiative/).

Highlights of the position:
- **Help save the world** by contributing to efforts to reduce the impact of climate change!
- Access to **large-scale data and GPU compute** resources
- **Competitive salary** varying by previous experience and role
- **Advance the frontiers** of computer vision and deep learning research
- Develop software that will have an **immediate impact** on real world applications
- **Live in sunny San Diego!** (Surfing before/after work hours is optional, but recommended.)

Candidates must have:
- A strong background in machine learning, with demonstrated experience in academic or industrial research settings.
- Experience with deep learning-based computer vision techniques such as (but not limited to): image segmentation, object detection, pose estimation, image registration, and/or multi-object tracking.
- A firm grasp on modern practices in software engineering in Python, including version control, CI/CD, type hinting, linting and environment management.
- Examples of their computational work demonstrating their mastery of software engineering and machine learning available on GitHub.

Preferable skills and credentials include (but are not required):
- MS or PhD in computer science, electrical engineering, physics, computational biology, or other related disciplines.
- Experience with containerization and orchestration frameworks such as Docker and Kubernetes.
- Experience with web development, including cloud ops, frontend development and/or backend development.
- Familiarity with computer vision-related sub disciplines such as computer graphics or computational geometry, with skills in animation, point cloud reconstruction, shape reconstruction, 3D modeling, animation or related applications.

The precise role and compensation range will be determined by the applicant's background and interest. These roles include computational postdoctoral fellow (**$70k+**) for those interested primarily in conducting research, and scientific programmer (**$100k+**) for those interested primarily in software engineering.

If interested, please email talmo@salk.edu and wbusch@salk.edu with a CV and link to GitHub.