

**Digital Domain 3.0, Inc**  
**JOB DESCRIPTION**

<b>Job Title:</b> Software R&D Intern	<b>Department:</b> Software R&D
<b>Reports to:</b> Senior Director of Software R&D	<b>Status:</b> Non-Exempt
<b>Classification:</b> Full Time, Project	<b>Date:</b> May 2021

**Purpose of the job:**

Digital Domain is seeking interns for its Software R&D group. The software R&D team is split between Vancouver and Los Angeles and is working on some of the most exciting projects in computer graphics. When we get an intern, we pair them up with a software developer and use the intern to explore aspects of computer graphics and machine learning that are interesting, difficult and slightly off the beaten path. Basically, our software team is working on projects that we think will work and be useful to the artists at Digital Domain. Interns get to try ideas that may not work, but if they do, would have huge payoffs. These kinds of problems are also perfect for research papers and we expect our interns to attempt to publish the work they do here.

Our current focus is on creating realistic digital humans and creatures. For this, we're using a lot of cutting-edge machine learning techniques. These are just some of the current long-term projects we're working on:

- using machine learning to create easy-to-use, highly accurate methods of motion capture (both facial and body motion capture)
- everything that has to do with creating an autonomous digital human including: conversational AI, speech recognition and synthesis, NLP, audio driven facial animation, neural rendering, and more.
- image-to-image transformation using machine learning to change one person into another
- using machine learning to accelerate clothing simulation and fluid simulation

Because these projects are complex, we prefer interns who can commit to extended stays. A 10 week internship is the absolute minimum. Longer internships (3-4 months) are preferred.

**Essential Functions/Responsibilities:**

- Developing new software to solve interesting problems in computer graphics and machine learning.
- Doing research to build a foundation of existing work and to help formulate an approach to the problem.
- Learning the user interfaces and APIs of animation and modeling packages like Maya and Houdini and Unreal.
- Writing a technical paper summarizing the technology developed during the internship.

**Qualifications:**

**Education and/or Experience Required:**

- B.S. or higher degree in Computer Science, Mathematics, Statistics or related field.
- The ability to program in either C++ or Python. Knowing both languages is ideal. If you have experience in PyTorch or TensorFlow, that's good but not essential.
- The ability to read and understand research papers with considerable mathematics.

**Working Conditions and Environment/Physical Demands:**

- Office working environment.
- Hours for this position are based on normal working hours but will require extra hours pending production needs.
- Walking/bending/sitting.

*The above statements are intended to describe the general nature and level of the work being performed by people assigned to this work. This is not an exhaustive list of all duties and responsibilities associated with it. Digital Domain 3.0, Inc management reserves the right to amend and change responsibilities to meet business and organizational needs.*

*As an equal employment opportunity employer, Digital Domain commits to a work environment free from unlawful discrimination where all employees are treated equally with dignity, respect and based on individual experience and potential, without regard to any personal classifications protected by applicable laws, regulations and ordinances.*