CV/ML Engineer (x/f/m) | AKA “the next SMPL-whiz!” | Meshcapade

Full-time (Remote optional; EU time zones preferred)

Emphasis: expanding the SMPL family of statistical models, motion & shape estimation methods

Salary: €70K-90K

About Meshcapade

Meshcapade is the 3D digital human company. We are creating realistic human avatars for use in apparel, games, fitness, AI, and augmented reality. Using machine learning and computer vision, we model the nuances of human body shape and movement. We automatically convert photos, 3D & 4D scans, RGB-D sequences, Mocap and even words into realistic 3D humans. We are a spin-off from the Max Planck Institute for Intelligent Systems in Tübingen, Germany and our products are powered by state of the art, patented research. Our core product, Meshcapade Studio, is an online platform for the creation, animation, and use of 3D digital humans. Our clients run the gamut of global names; a broad mix of tech, media, health and fitness, apparel, and education.

What we offer

We are a team of passionate creators from a variety of backgrounds, seeking to change how people generate, think about, and make use of digital human avatars. Salary will be commensurate with experience. Our offices are based in Tübingen, Germany and we offer relocation support. Remote working options are also available.

What is SMPL?

SMPL is a realistic 3D statistical model of the human body trained from thousands of high-resolution 3D body scans. It was developed by Meshcapade’s founding team at the Max Planck Institute in Tübingen. Since its release in 2015, SMPL has been widely adopted in academia and industry, enabling new sub-fields of computer vision that focus on human mesh recovery as well as human interaction with objects and scenes. SMPL

is also widely used as ground truth for training neural networks for human pose and shape understanding and for a wide range of applications in apparel sizing, apparel design, fitness, and animation.

Responsibilities

You will be involved in Meshcapade's internal and external collaborative initiatives. Meshcapade has an ongoing research and collaboration partnership with Max Planck Institute allowing us to participate in cutting edge R&D on statistical body modelling, body shape & motion estimation methods, and neural representation of bodies in digital worlds. You will work closely with the founders to:

- Develop new statistical body models, and neural methods for new population demographics (SMPL and beyond)
- Participate in ongoing research projects with external research partners and help define new research initiatives
- Coordinate with the engineering teams to automate and productize latest research, both internal and collaborative
- Define the technical direction on evaluation methods, improvements and further development of software using the machine learning and NNs

Requirements

- Solid understanding of 3D computer vision, deep learning, and training new machine learning models for human pose & shape estimation
- Experience developing optimization techniques for fitting SMPL and other related models to sensor-based data (RGB-D, images, mocap or 3D scans) or
- 5+ years experience developing in Python and/or C++
- Master's or PhD degree in computer science or related field
- Proven track record of publications on topics related to statistical body modelling, estimation or motion tracking methods
- Strong understanding of computer vision, graphics and machine learning
- Excellent written and oral communication skills

Bonus Skills

- Demonstrable experience with the SMPL family of statistical models

Diversity isn’t just a statement at Meshcapade, it sits at the core of the company. We believe in the diversity of thought because we appreciate that this makes us stronger. Therefore, we encourage applications from everyone who can offer their unique experience to our collective achievements.

Apply here: job@neckar-hub.com

Your contact person is Naureen Mahmood