



Jakob Welner

Hybrid Engineer: Robotics, Biology and Arts

Hybrid Knowledge Curious Bio-Inspired Prototyping

Contact

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📍 Copenhagen, Denmark

About Me

Trained Mechanical and Biomedical Engineer, previous careers as professional character animator for Hollywood films, software developer, artist and robot developer.

Keen interest in what lies between topics, where humanities and STEM meet, psychology of users and their product-interactions, data-pipelining and workflow optimisation as well as cross-discipline similarities

Spent 3+ years abroad including 2 years of professional work as Character Animator on two Hollywood Feature Films in Sydney and London.

Further professional roles include Technical Consultant, Story Developer, Guest Teacher/Speaker and Animation Supervisor.

Adventures include designing and building EMG-controlled soft-robotic exoskeleton, building a useless box that turn itself off when you turn it on, developing a biped powered passive-walker robot for a games company, spending five months at a Drawing Academy to learn classical drawing, composition and shapes representation

EXPERIENCE

HRI Interface Developer

Shape Robotics • Denmark • Since March 2017



- ▶ Human-Robot Interaction, Unity Robot Face Developer

Dynamic Robot R&D

SYBO Games • February 2016 to April 2016



- ▶ R&D on Interactive Powered Biped Passive-Walker

Animation Supervisor

BaconX • Denmark • January 2015 to May 2015



- ▶ Supervised 3 photoreal CG animals (Eagle, Shark and Polar Bear) on the global Magnum ad campaign "Release the Beast"

Technology Consultant

Rokoko • Denmark

• September 2014 to December 2014



- ▶ Consulting on hardware/software technologies and R&D on Salto, now known as the Smartsuit Pro

Teaching

Various • 2011 to 2013

- ▶ Guest Teacher, Python Programming, The Animation Workshop
- ▶ Guest Teacher, Animation - TRUEMAX Academy

Software R&D

Various • January 2007 to May 2012

- ▶ Pipeline Consultant at Duckling, M2Film and BaconX - 5 months
- ▶ Freelance Workflow and Tools R&D at various companies in the Animation Industry in the period: 2007-2012

Character Animator

Various • November 2004 to January 2011

- ▶ Animal Logic, Sydney: Hollywood Feature Film "Legend of the Guardians" directed by Zach Snyder - 10 months
- ▶ Double Negative, London: Hollywood Feature Film "John Carter" directed by Andrew Stanton - 10 months
- ▶ Duckling A/S, Copenhagen: Award Winning Adverts for Carlsberg Sport: Squirrel and Penguin - 13 months
- ▶ Freelance for various companies between 2004-2011

EDUCATION

M.Sc Biomedical Engineering

Technical University of Denmark • Since September 2016

B.Sc Mechanical Engineering

Technical University of Denmark

• September 2012 to February 2016

Course Diploma - Classical Drawing

The Drawing Academy - AnimWork • 2006 to 2007

SKILLS

Biomedical

- ▶ Product Development ★★☆☆☆
- ▶ Human Physiology ★★☆☆☆
- ▶ Life Science ★★☆☆☆
- ▶ Living Systems ★★☆☆☆
- ▶ Physiological Modelling ★★☆☆☆

Personal Traits

- ▶ Curiosity ★★★★★
- ▶ Resourcefulness ★★★★★
- ▶ Planning ★★☆☆☆
- ▶ Independent ★★★★★

Technical

- ▶ Product R&D ★★★★★
- ▶ Python & C++ ★★☆☆☆
- ▶ Control Engineering ★★☆☆☆
- ▶ Signal Processing ★★☆☆☆
- ▶ Usability Design (UX) ★★☆☆☆

INTERESTS

Creative

- ▶ Simplifying the complex by adjusting POV
- ▶ Body language and visual storytelling
- ▶ Percussion and aesthetics in beats

Concepts

- ▶ Usefulness with Beauty
- ▶ Biomimetics
- ▶ Symbiosis and Dysbiosis
- ▶ Microbes and Living Systems
- ▶ Optimizing Inefficient Systems
- ▶ Multidisciplinary Concepts
- ▶ Systems Engineering and holistic design

Travel

- ▶ Exploring alternative perspectives
- ▶ Garnering appreciation of Home