

# Stephan Kozak

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Demo Reel Links - [Demo Reel](#) | [Animation](#) | [Visual Effects](#) | [Motion Design](#) | [Research](#) Academic Research Link - [Academic Research CV](#)

## PROFILE

- Inventor of **Mixed Reality (MR) character pipeline** for Meta Oculus, [Dynamic Digital Humans](#) (Patent No. PCT/IB2020/050502)
- Created Marija the [first Virtual Human](#) to be **granted citizenship**.
- Collaborated with **Microsoft Azure** developer team to improve performance and clarity of the **AI generated phonemes**.
- supporting the adoption of generative animation through [M-body](#) open-source conversational animation datasets and tools
- **Panelist** for speaking engagements on **Innovation, AI Research, Virtual Humans, and Animation Production Pipelines**
- Over **2 decades of production and post-production** experience in the entertainment industry
- Animated short distributed by Universal Studios, showcased at **11 International film festivals** including LA, Tokyo, and Vancouver
- Over **10 years of teaching experience** at university and college levels, **master's level program development** in animation at Sheridan

## EDUCATION

- Bachelor of Arts and Science, **University of Toronto** • Art and Art History, Method Research; Statistics
- Diploma Fine Arts - **Sheridan College**
- Autodesk Maya Certification - Information Technology and Design, **University of Toronto**

## EXPERIENCE

### PRINCIPLE CG ARTIST/ SPECIALIST | LAKEVIEW ANIMATION | 2015-PRESENT

- creating high-quality animated content, virtual humans, and interactive experiences using cutting-edge animation, design, and generative AI for diverse industries.
- Gen- AI, neural rendering, character design, creation, animation, visual effects, demonstrative evidence, dynamic simulations, art direction, compositing, set design, filming, real-time, in-line rendering, editing, tracking and compositing

### PRINCIPAL INVESTIGATOR; LEAD of CG, ANIMATION AND VISUAL EFFECTS | SHERIDAN COLLEGE, SIRT | 2016-2024

- Lead teams and secured funding to advance animation and research in entertainment, health sciences and education, focusing on Virtual Humans, AI, ML, and real-time production.
- Develop advanced character workflows and procedural pipelines to enhance realism and efficiency in animation.
- Utilize virtual production and real-time rendering to integrate live action with CGI and provide immediate production feedback.
- Leverage AI and machine learning to automate processes and innovate workflows in collaboration with industry leaders.

### VISUAL EFFECTS SUPERVISOR / ARTIST | CORUS ENTERTAINMENT | 2015-2016

- Production/ postproduction for commercial/ advertising department in broadcast, film, mobile, online, and live events.
- VFX Supervision, job quotation, campaign design, project management, visual effects, 2D/ 3D animation, matte painting, story boards, simulation, texturing, lighting, rigging, rendering, and compositing

### VISUAL EFFECTS SUPERVISOR/ TECHNICAL DIRECTOR | SHAW MEDIA | 2010-2015

- Production/ postproduction for broadcast, film, mobile, online, and live events.
- VFX Supervision, job quotation, campaign design, project management, advertising, graphic design, motion design, visual effects, 2D/ 3D animation, matte painting, story boards, simulation, texturing, lighting, rigging, rendering, and compositing

### VISUAL EFFECTS ARTIST/ TECHNICAL DIRECTOR | CANWEST | 2006-2010

- Design, Brand development, promotions, advertising, visual effects, animation
- Visual effects and animations for the CANWEST commercial department and advertising agency

### COMPOSITOR/ VISUAL EFFECTS ARTIST | IMAX | 2006

- Team Lead for 3d Depth Stereoscopic conversion
- Compositing, Z-Depth, Roto on the movie *Superman Returns*

### 3D INSTRUCTOR | SENECA COLLEGE | 2003-2005

- Instructed classes in 3D modeling, lighting, character animation, visual effects, and compositing

### MOTION DESIGNER | ALLIANCE ATLANTIS | 2001-2006

- Design packages, promotion spots, advertising campaigns
- Launching of Alliance Atlantis specialty channels; BBC Canada, Discovery Health, Food Network, HGTV, History Television, IFC, National Geographic Channel, Showcase, Action, Diva, and Slice.

### 3D INSTRUCTOR | UNIVERSITY OF TORONTO | 2000-2002

- Instructed certified Maya classes at U of T, modeling, lighting, character animation, visual effects and compositing.

### 3D ANIMATOR | SOHO | 2000-2001

- 3D animation, character design, modeling, rigging, lighting, texturing, rendering, graphic design, motion graphics

## CLIENT LIST

Coca-Cola, Disney, Pixar, RBC, Unilever, General Electric, Johnson and Johnson, Shaw, Rogers, Global, Slice, HGTV Canada, Showcase, Food Network Canada, National Geographic Channel, BBC Canada, History, Universal, Paramount, Guinness, Colgate, Miller, Tim Hortons, Turner Broadcasting, ESPN, Ford, Chrysler, TD Bank, Scotia Bank, Side FX

## SKILLS

### SOFTWARE

Gen-AI software and tools, Maya, Z-brush, Substance, Mari, Marvelous Designer, Nuke, Resolve, Unreal, Unity, Houdini, Photoshop, Illustrator, Premier, After Effects, Omniverse, Reallusion, Faceware, Ziva, Blender, Cascadeur

### SCOPE OF WORK

Expertise in advanced software innovation, including generative AI integration, workflow creation, skills training, and VFX direction for live action and CG integration. Proficient in photogrammetry, modeling, rigging, texturing, lighting, animation (2D-4D), motion capture, simulation, rendering, and compositing for both real-time and in-line workflows. Production scope includes complete comprehensive pipelines for characters, environments, and VFX, from conception to creation. Specializes in virtual humans and the architecture of digital doubles. Experienced in mixed reality, AI (generative AI), rendering development, virtual production, web development, procedural animation and automation, in-camera VFX, motion capture (multi-modal body, face, and hands), real-time compositing, and object and human scanning.

### LEADERSHIP

Led pre-production, planning, quotations, and directing visual effects shots that combine live action and CG. Collaborate with directors and producers to achieve desired effects with cost-effective solutions. Works with companies and teams to develop synchronized workflows, promoting technological advancements. Educates the public and industry on standardizing workflows and leveraging cross-industry innovations, including AI, machine learning, and procedural animation. Enhances public awareness through education and collaboration with Sheridan College leadership to create new programs. Focuses on creating sustainable employment in the digital economy by leveraging the skills and talents of youth and underprivileged communities. Responsible for hiring and training personnel, managing multiple groups on various grants in film production, software development, motion capture, animation, character creation, and virtual production.

## PATENTS

**Animation of Avatar Facial Gestures** (Patent No. 11436782, Application No. 17/425117, Issued September 6, 2022)

## CONTRIBUTIONS

### Procedural Animation of Conversational Gestures for Virtual Humans

- Collaborating with three research centers aiming to accelerate the advancement and adoption of generative character animation.
- Enhanced realism and precision of virtual human movements, creating standards, and novel datasets for ML.

### Real-time AI Sign Language Translation Virtual Humans for the Deaf

- Developing a real-time bilingual translation system for the Deaf Community in collaboration with Transport Canada.
- Improving accessibility in transportation environments

### AI supported Characters for Dementia and Alzheimer's

- Created AI-supported assistants for those suffering with cognitive impairment, the elderly, and caregivers.
- R&D in interaction quality and user experience for the elderly and caregivers.

### Dynamic Digital Humans (DDH)

- Developed cost-effective photorealistic articulate digital human characters for Oculus Quest and Mixed Realities (VR/AR).
- Introduced the first optimized, high-fidelity facial animation for VR game platforms.

### Human Animation and Behavioral Modification Research

- Collaborated with SideFX in creation of photorealistic character pipeline for Houdini software.
- Supported R&D of new tool in Houdini called Topo Transfer and boosted productivity in digital character modeling.

## PUBLICATIONS/ PROJECT LINKS

AI- Open-source data and tools for Generative AI - [M-body.ai dataset Article](#), [M-body.ai Animation Article](#), [Webinar](#), [Academic Poster](#)

AI - Polytechnic Showcase - [Leveraging AI for Improved Elder Care](#)

Character Pipeline - 2024 Canadian Screen Award Winner - [Survivorman VR with DDH](#)

Character Architect - Dynamic Digital Humans for VR - [DynamicDigitalHumans.com](#)

Character Pipeline - AI Characters with Reimagine AI - [Reimagine.ai](#)

Character Artist - Worlds First Virtual Citizen - [WorldRecordAcademy.org](#)

Character Pipeline - Faceware Webinar - [Link](#), [Workflow Webinar](#)

Interviews - Before and After VFX and Reallusion magazines - [M-body.ai BeforeAndAfter.com](#), [Reallusion.com](#), [Philip Curry Museum](#)

Please navigate links and feel free to contact me for references and additional projects.