

Liza J. Knipscher

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Twitter: @knipsch

Work Experience

Medical App Developer Barrow Neurological Institute

June 2018 - Current

- Design and develop educational interactive applications for neurosurgical residents using C#/Unity
- Created a 3D interactive neurosurgery communication tool with real-time craniotomy cutting and tissue deformation
- Developed VR spine simulation prototype, which received additional funding from donors to allow for the creation of a spine VR lab associated with the Sonntag Spine Center

Owner

Knipscher Interactive, LLC

(LLC established May 2020; previously sole proprietor)

September 2018 - Current

Company: Embodied Labs

- Created VR storyboard for medical visualization
- Additional VR art assets during production

Company: Pipette Kids

- Solo developed 2D educational mobile game, "Bacteriopets," to teach elementary to middle school audience about gut microbiome
- Published Bacteriopets on Google Play and iOS

Graduate Assistant

Physical Therapy Department, UIC

August 2017 - May 2018

- Collaborated with physical therapists to design interactive applications for clinician and patient use
- Reviewed physical therapy literature and integrated recent findings into application prototypes

Skills

Game, Application, and Simulation Development

- Unity, PlayCanvas, C#/I.NET, JavaScript, Visual Studio, VS Code
- Recent Unity tools including High Definition and Universal Render Pipelines and ShaderGraph
- Oculus integration for Unity, SteamVR, VRTK
- Google Play and iOS App Store publication

3D Modeling

- ZBrush, Maya, Substance Painter, Houdini

2D Illustration & Design

- Adobe CC: Photoshop, Illustrator, InDesign

Education

University of Illinois at Chicago

MS in Biomedical Visualization

Graduated June 2018

GPA: 4.00

Purchase College, State University of New York

BA in Psychology with Biology and Visual Arts minors

Graduated January 2015

Research

Master of Science Project Research: "Gaming for Stroke Rehabilitation: Creating an Engaging Experience"

UIC Brain Plasticity Laboratory with Dr. Madhavan

UIC Mixed Reality Laboratory with Dr. Luciano

Spring 2017 - May 2018

- Developed physical therapy game interface
- Integrated game with ankle therapy device prototype
- Evaluated effectiveness of various game elements

Summer Research Intern

Lab of Dr. Cho, Burke Medical Research Institute

June 2014 - August 2014

- Used RT-PCR to determine levels of CD-36, a class B scavenger receptor, and related molecules in brains of mice at various timepoints after induced stroke

NSF REU Student Intern

Lab of Dr. Basil, Brooklyn College

January 2014 - May 2014

- Researched chambered nautilus navigational memory
- Designed and presented poster at 2014 Science Research Day at Brooklyn College

Activities and Memberships

Association of Medical Illustrators

Student Member: 2016 - 2018

Professional Member: 2019 - current

Social Media Committee Member: Summer 2020 - current

Health Tech Jam at UIC

Judge and Volunteer: October 2020

CodeDay Labs

July 2020: Mentored two college programming students as they created a guide to poisonous plants with Unity

Women in Games International

Member: 2019 - current

Awards

Award of Merit for Interactive, "Opsonization"

Association of Medical Illustrators, 2018

Lillian B. Torrance Scholarship

University of Illinois at Chicago, Spring 2018

Vesalius Trust Research Grant

The Vesalius Trust, 2018

Chancellor's Student Service Leadership Award

University of Illinois at Chicago, Spring 2018

Award of Merit for Editorial Illustration, "Working Heart"

Association of Medical Illustrators Salon, 2017