

# Victoria Perizes, MSc

## Relevant Project

### Career Compass

[Github Repo](#) || [Website](#)

Career Compass is my solution to keeping a record of every position I've applied for, the corresponding company details, and the current status of my applications.

- Frontend: custom CSS, vanilla JavaScript, and React.
- Backend: uses RESTful architecture. Built with Javascript, Node, and MongoDB.
  - Created custom javascript middleware for handling authentication, authorization and data validation.

## Professional Experience

### Backend Developer, Volunteer | PanPalz

June 2024 - Present

- Use JavaScript and Node.js to build the backend for the world's first nonprofit social media app.

### Consultant, Biomedical Solutions: Space Medicine | Level Ex

Nov 2022 - Feb 2023

- Oversaw space medicine projects with NASA and SpaceX.
- Continued to function as Principal Investigator while onboarding new team members.

### Lead Biomedical Solutions Specialist | Level Ex

May 2022 - Nov 2022

- Principal Investigator (PI) and lead grant author - awarded \$1.1 mil from the Translational Research Institute for Space Health (TRISH) supporting the development of ultrasound training solutions for Astronauts participating in Artemis missions.
- Worked closely with internal and external (NASA, KBR, SpaceX) stakeholders to shape software solutions.
- Participated in rapid prototyping in engine (Unity, C#). Collaborated with other designers, artists, and developers on a daily basis.
- Collaborated with graphics engineering team to determine best approach for creating digital twins to further support digital ultrasound tech development.
  - Defined data requirements to create pipelines that could support volumetric mesh data structures consisting of mechanical and acoustic tissue data. These data were central to game design and play.
- Responsible for project scoping, product roadmap, and medical design of our

## Contact

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[Portfolio](#)

[Github Profile](#)

## Skills

### Programming Languages

C#, CSS, HTML, JavaScript, Python

### Frameworks & Libraries

Axios, Django, Express, fastAPI, Node.js, React, Three.js

### Tools & Platforms

Agile Dev, Figma, Git, GitHub, Jira, Postman, Thunderclient, Render.com

### Databases

MySQL (SQL), MongoDB +  
Mongoose (NoSQL)

### Game Engines

Unity 3D

## Education

### University of Illinois at Chicago (UIC)

MSc, Biomedical Engineering -  
Concentrations in  
Biomechanics and Neural  
engineering

BSc, Kinesiology -  
Concentration in  
Biomechanics

## Publications

[A Theoretical Framework for  
a Network of Elastic  
Elements Generating  
Arbitrary Torque Fields.](#)  
*BioRob. IEEE, 2020 pp.  
286-291.*

ultrasound training solution for Artemis Astronauts.

- Co-Principal Investigator working with SpaceX, KBR and TRISH, creating a just-in-time instructional ultrasound guide [supporting SpaceX's Polaris Dawn mission](#).

## Senior Biomedical Solutions Specialist | Level Ex

Oct 2019 - May 2022

- Co-Principal Investigator and Co-authored grant - awarded \$1.5 mil from TRISH to support the development of the [Virtual Human Simulator \(VHS\) platform](#).
  - Led team through the entire product lifecycle.
  - Led product design.
  - Collaborated with leadership to define product vision and roadmap.
  - Collaborated with graphics engineering team to develop a real-time virtual ultrasound tech stack running in Unity (1st of its kind).

## Biomedical Solutions Specialist | Level Ex

Aug 2017 - Oct 2019

- Worked closely with our medical device and pharmaceutical customers to shape software solutions.
- Developed algorithms characterizing specific behaviors of biologic systems. Algorithms were foundational to game design.
  - Modeled the relationship between lung mechanics and gas transport using C#.
  - Modeled the reversal of neuromuscular blockades used in anesthesiology using R (programming language). **(See portfolio for math model and code).**
- Led and was responsible for biomedical research and strategic oversight for [Airway Ex](#) and [Pulm Ex](#), the first professional video games for Anesthesiologist and Pulmonologists.

## Graduate Researcher | Shirley Ryan Ability Lab

August 2016 - June 2017

- Led the design of the ExoNET (previously MARIONET) - a passive, torque assisting exoskeleton - to aid in the rehabilitative process for recovering stroke patients.
- Developed mathematical models and algorithms to empirically optimize ExoNET parameters to achieve any desired torque profile for single and two-joint actuation using the MATLAB. *Paper published in 2020.*

## Certifications

### The Complete 2023 Web Development Bootcamp (Nov 2023)

Issued by Udemy, Instructor: Dr. Angela Yu

### Shader Graph for Beginners (April 2023)

Issued by Udemy, Instructor: Penny De Byl

### Unity Essentials Pathway (April 2022)

Issued by Unity Technologies

## Awards

### Moxie Award Winner (2022)

Presented by BuiltIn for outstanding contributions to the tech industry