Victoria Perizes, MSc

Relevant Project

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

Career Compass is my solution to keeping clean and organized records during your job search.

- Developed reusable and dynamic frontend UI components using React, custom CSS, and Javascript.
  - Used React Query to fetch, cache, and update data from the backend.
  - Used React's useContext hook to avoid excessive prop drilling.
- Designed and built the backend (RESTful architecture) using Javascript, Express, and Node.
  - Created custom Javascript middleware for handling authentication, authorization and data validation.
  - Used Thunderclient for backend route testing.
- Used MongoDB to persist data. Wrote data queries and created aggregation stages to show job application statistics.

Professional Experience

Backend Developer, Volunteer | **PanPalz**

June 2024 - Present

- Researching Amazon API Gateway as a proxy for DynamoDB to inform backend development

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

Nov 2022 - Feb 2023

- Continued to participate in early concepting using Miro and Figma for ultrasound training games designed for Artemis astronauts. Worked alongside lead designer.
- Continued to function as Principal Investigator while onboarding new team members to space medicine projects with NASA and SpaceX.

Lead Biomedical Solutions Specialist | **Level Ex**

May 2022 - Nov 2022

- Participated in rapid prototyping in engine (Unity, C#). Collaborated with other designers, artists, and developers on a daily basis.
- Collaborated on R&D with graphics engineering team to determine best approach for creating digital twins to further support virtual ultrasound technology development.
  - Defined data requirements that could support volumetric mesh data structures consisting of mechanical and acoustic tissue data.

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.*

- Project lead (Principal Investigator) in the continued development of ultrasound training solutions for Astronauts participating in Artemis missions. Funded by the Translational Research Institute for Space Health (TRISH). Award amount: $1.1 mil.
  - Responsible for project scoping, product roadmap, and medical design.
- Worked closely with internal and external (NASA, KBR, SpaceX) stakeholders to define software solutions.
- 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

- Worked in engine (Unity, C#) alongside lead developer to create data entry tools for the level design team.
- Collaborated with graphics engineering team on R&D to simulate ultrasound wave propagation physics and create synthetic data to develop a real-time virtual ultrasound technology.
- Used Miro to create designs and user flows.
- Project lead (Co-Principal Investigator) in the development of the Virtual Human Simulator (VHS) platform funded by TRISH . Grant amount: $1.5 million
- Collaborated with leadership to define product vision and roadmap.

Biomedical Solutions Specialist | Level Ex

Aug 2017 - Oct 2019

- Developed algorithms characterizing specific behaviors of biologic systems. Worked with leader software engineer to implement algorithms in engine (Unity, C#) and test edge cases.
  - 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).***
- Responsible for biomedical research and strategic oversight for Airway Ex and Pulm Ex.

Graduate Researcher | Shirley Ryan Ability Lab

August 2016 - June 2017

- Designed the ExoNET - 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 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