STEVEN WORLEY

RESEARCH ASSISTANT

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SUMMARY

I'm a biomedical engineer with more than three years of hands-on experience performing laboratory work. Highly self-disciplined with the ability to prioritize tasks but also able to change directions and remain flexible. I have demonstrated proficiency in collaborating with and providing guidance to team members and presenting data clearly and in a readily usable format.
My area of expertise related to searching methods for optimizing data acquisition and analytics, information and workflow in R & D clinical trials, human subject research and animal surgeries.

SKILLS

- experience in sensitivity analysis, fatigue analysis, and reliability analysis.
- Solid experience in nonlinear dynamic analysis and transient analysis using ANSYS and ABAQUS
- Author of 3 peer-reviewed journal articles and 1 book chapter, plus 5 conference presentations
- Proficient in optical experimentation and Matlab/Python/LabVIEW programming.
- Leader of local student professional group, possess award-winning verbal and written presentation skills
- 3+ years of experience in the thesis, research, policy analysis, project management, graphic design;
- Interests in urban sustainability, built environment, the impact of public policies, equity, and resiliency;
- Proficiency in MS Office, Adobe Photoshop, Illustrator, InDesign, Premiere Pro, ArcGIS (spatial analysis), R (statistical analysis);
- Excellent visual communication and project coordination skills.
- Works well alone or as part of a team.

EDUCATION:

M.S. Biomedical Engineering in Neural Engineering, 2019
University of Southern California

B.S. in Neuroscience,2019
University of Southern California

PUBLICATIONS

- Intracranial pressure influences the behavior of the optic nerve head, 2019
- ·Relative Contributions of Intracranial Pressure and Intraocular Pressure on Lamina Cribrosa Behavior, 2019
- ·Mechanical properties of the optic nerve head, 2018

PROFESSIONAL EXPERIENCE:

RESEARCH ASSISTANT

G&W Laboratories -Lincolnton, NC | Sept. 2017 - Present

- Performe spectral analysis of electrophysiological datasets in MATLAB to identify how a rat's peripheral nerve reacts to different current stimuli (40uA - 200uA) utilizing EMG biomedical measurement systems.
- Perform histology on an excised, collagenated nerve to observe the effect of the drug in localized lysing of the epineurium.
- Collaborate on 'in vivo' animal surgeries in a team size of two for reliability and acute testing of Lyse-and-Attract Cuff Electrode (LACE).
- Mastere Inkscape software in 5 days by building a neuroanatomical prototype of a rat's hippocampus to model membrane conductivity parameters of a peripheral nerve to pitch for a proposal grant.

RESEARCH ASSISTANT

University of North Carolina -Charlotte, NC | Apr. 2016 – May 2017

- Managed 3-D motion-capture technology to record kinematic characteristics of movement and EMG to digitize activity of upper arm muscles after being designated graduate student lead in clinical biofeedback group and receiving monetary compensation for time and team mentoring.
- Conducted over 50 electrophysiology and clinical biofeedback experiments building 2 research groups in pediatric movement disorders on Deep Brain Stimulation patients suffering from dystonia demonstrating high-quality data collection and documentation skills.
- Led research members on managing post-analysis of kinematic datasets with over 200 hours of experience in data analysis through Cortex software producing scientific results to meet the research proposal grant deadline.
- Analyzed and synchronized 3D kinematic, EMG, and iPad "figure 8" high-quality data in MATLAB creating a data visualization enabling team collaboration to identify biofeedback issues.