Ashwin Sakhare

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https://arsakhar.github.io

PROFESSIONAL SUMMARY

Data Scientist with a strong neuroimaging background and 5+ years of experience in software development and statistical analysis of clinical data.

WORK EXPERIENCE

PhD Researcher
Aug. 2015-Present

University of Southern California — Los Angeles

- Conducting a 2-year clinical trial assessing impact of cognitive stimulation and exercise in VR on brain health in older adults.
- Utilizing multi-modal MRI imaging techniques to detect early neural dysfunction in older adults at risk for Alzheimer's disease.

Systems Engineer
Jul. 2011-Jun. 2015

LipoScience — Raleigh, NC

- Managed electrical, mechanical, and fluidic design changes to Vantera, an FDA-cleared clinical blood analyzer.
- Performed root-cause investigations to troubleshoot failures, reducing downtime and improving sample throughput.

ACADEMIC PROJECTS

Deep Learning in MRI
Feb. 2020-Jul.2020

- Created a pre-processing pipeline to extract and label meningioma slices from 3D MRI volumes.
- Implemented a convolutional neural network (CNN) for predicting meningioma consistency (grade 0-3) on MRI scans.

MRI Image Processing Software
Apr. 2020-Oct. 2020

- Built an interactive Python GUI application for visualizing 15+ cerebral flow measurements associated with brain health.
- Developed an MRI image processing algorithm for manually segmenting anatomical regions of interest (ROI).

Health and Fitness Monitoring Client
Jul. 2020-Nov. 2020

- Created a Python GUI application supporting real-time visualization of health and fitness data broadcast from ANT+ wireless devices.

Virtual Reality Games for Brain Health
Apr. 2017-Present

- Supervised a cross-functional team of 10 engineers, technical artists, and neuroscientists.
- Programmed gameplay and game mechanics for 3 virtual reality games in Unity3D.
- Developed registration/login system; built backend SQL database for querying and storing game data.
- Programmed real-time serial and UDP data communication between game and hardware peripherals.
- Partnered with 3 engineers to design & build a VR exercise bike.

EDUCATION

University of Southern California
Doctor of Philosophy
Biomedical Engineering
Aug. 2015-Apr. 2021
Los Angeles, CA

University of Southern California
Master of Science
Biomedical Engineering
Aug. 2015-May. 2017
Los Angeles, CA

North Carolina State University
Bachelor of Science
Biomedical Engineering
Aug. 2005-Dec. 2009
Raleigh, NC

SKILLS

Python
C#
SAS
SPSS
Unity3D

RELEVANT COURSEWORK

Applied Statistical Data Analysis
Machine Learning for Data Science

ACTIVITIES

USC SMART-VR Ambassador
USC Street Dance Society