Ashwin Sakhare

PROFESSIONAL SUMMARY

Data Scientist with 5+ years' experience in neuroimaging, software development, and conducting clinical trials. Experience with statistical data analysis and applications of ML algorithms to medical imaging.

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.

DATA SCIENCE PROJECTS

Evaluating College Football Coaches

- Performed web scraping and exploratory data analysis to evaluate recruiting and player development.

Tumor Classification

- Implemented a ResNet CNN for predicting meningioma consistency (grade 0-3) on MRI scans.

Image Colorization

- Developed a CNN with 3 MLP layers to convert a grayscale image into a k-colored image.

SOFTWARE PROJECTS

MRI Image Segmentation and Analysis Tool

- Built an interactive Python GUI application for visualizing 15+ cerebral flow measurements associated with brain health.

Health and Fitness Data Monitoring Client

- 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

- 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.

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sakhare@usc.edu
336-264-6462
Los Angeles, CA
https://arsakhar.github.io

EDUCATION

University of Southern California

Doctor of Philosophy
Biomedical Engineering
Aug. 2015-Mar. 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