Devashish Singh

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Summary

I am a working professional with seven years of experience in data analytics. I have worked extensively in fast paced research labs in the fields of neuroscience, computer vision, translational medicine and nanotechnology. I am currently working as a research assistant at the Smith-Kettlewell Eye Research Institute and looking to find a job in the fields of data science.

Education

DataCamp   Completed: September 2023

Data Scientist Professional in Python Bootcamp
Data Scientist in Python Bootcamp

University of Illinois at Urbana-Champaign   Graduated: May 2018
Bachelor of Science in Molecular and Cellular Biology   GPA: 3.50/4.00
Minor in Chemistry

Work Experience

Smith-Kettlewell Eye Research Institute   San Francisco, CA
Research Assistant   February 2019-Current

- Studied eye movement responses to various visual stimuli in neurotypical and neurodivergent individuals while working under Dr.Stephen Heinen and Dr.Arvind Chandna
- Roles included experimental design, collection, cleaning, statistical analysis and visualization of large data sets from clinical studies
- Designed neural network models to simulate various types of binocular eye movements
- Author on publications in renowned scientific journals and presentations at global conferences
- Ran workshops to train new researchers on how to use existing data analysis pipelines and design their own
- Was also involved in the design and implementation of multiple user behavior studies to understand the effectiveness of hybrid meetings in research, enhance outreach initiatives and understand patient perspectives on their visual disorders

Skills used: MATLAB, Python, Simulink, Arduino, Excel, User Behavior Analytics, Behavioral Psychophysics

NASA Ames Research Center   Mountain View, CA
Intern   June 2017-August 2018

- Worked in Dr. Jing Li's research lab researching the effects of humidity on nanomaterials deposited on a sensor chip
- Ran tests on fabricated chips and developed analysis programs to analyze collected data which was presented at the NASA Ames intern symposium

Skills used: Excel

Mobility and Fall Prevention Laboratory   Urbana, IL
Undergraduate Researcher   January 2017-May 2018

- Worked in Dr. Manuel Hernandez's lab to investigate the changes in physical and cognitive ability as a result of age or impairment resulting from Multiple Sclerosis, Parkinson's disease or Alzheimer's disease
- Created processing pipelines to analyze data collected from individuals of various ages as they performed cognitive tasks and resented data at the Undergraduate Research Symposium

Skills used: MATLAB, R, Python, User Behavior Analytics, Behavioral Psychophysics

Publications and Presentations

Heinen, S., Chandna, A., Singh, D., Watamaniuk, S. (2023). A model comprising independent control and conjugacy explains miniature fixation eye movements. *Vision Sciences Society Annual Meeting*, St. Pete Beach, FL, May 2023.

Watamaniuk, S., Heinen, S., Singh, D., Chandna, A. (2023). Occluding one eye during fixation increases wandering of both eyes. *Vision Sciences Society Annual Meeting*, St. Pete Beach, FL, May 2023.

Heinen, S., Chandna, A., Singh, D., Watamaniuk, S. (2022). Marrying Helmholtz and Hering: A hybrid model of binocular control. *Vision Sciences Society Annual Meeting*, St. Pete Beach, FL, May 2022.

Chandna, A., Badler, J., Singh, D., Watamaniuk, S., & Heinen, S. (2021). A covered eye fails to follow an object moving in depth. *Scientific Reports*, *11*(1), 1-11.

Chandna, A., Singh, D., & Heinen, S. (2021). Asymmetrical movement of the covered eye during midline saccadic/jump vergence while accommodation remains symmetrical. *Journal of Vision*, 21(9), 2810-2810.

Chaparro G., Singh D., Hernandez M. (2018). Effects of aerobic fitness on prefrontal brain activation while dual-task walking in older adults [Conference Abstract].presented at *fNIRS 2018*, Tokyo, Japan. https://fnirs2018.org/wp-content/uploads/2018/09/fNIRS2018_abstract.pdf

Skills

- Mastery of MATLAB and Simulink
- Advanced understanding of Python (NumPy, Pandas, scikit-learn, SciPy, Matplotlib), R, and SQL
- Fluent in English, French and Hindi