Ashkan Alvand (Ph.D.)

Professional summary

I am a Research Analyst with 7 years experience in quantitative and qualitative research, powered by data science. I am driven to employ various quantitative methods to discover new insights and trends from health datasets.

- Ability to build a robust research plans with the ability to write technical documents and coding scripts in MATLAB, Python, and BASH as demonstrated by 20+ standard operating procedures/scripts on quantitative data collection, quality control, analysis and visualizations
- Ability to determine problems and derive actionable insights with expertise in data science and statistics using MATLAB and Python, resulting in 10+ technical reports and 5 peer-reviewed research papers
- Ability to implement machine learning methods using Matlab and Python packages such as Numpy, Scipy and Scikit-learn for extracting trends and building predictive models
- Ability to use business intelligence tools such as MS Power BI, Google Analytics and SQL for making dashboards and visualizations
- Ability to manage projects concurrently and work in multidisciplinary teams
- Ability to collaborate with internal and external stakeholders and cross-functional teams
- Ability to learn new tools and technology and adapt to a new environment

Selected Experience

MRI Scientist

Postdoctoral Research Associate, Liggins Institute, (02/2023 – 09/2023, Full-time)

Goal: Applying data science methodologies for analyzing MRI dataset, creating evidence-based actionable insights and interpret inferences for decision making

1. Collaborated with cross functional stakeholders to manage two research projects involving 200+ research participants data
2. Utilized Matlab, Python tools, BASH and docker engine to organize data, perform data cleaning, clerking and quality control
   Developed 6+ re-usable data analysis scripts using MATLAB, BASH, Neuroimaging tools
3. Conducted data analysis on MRI dataset using neuroimaging tools, BASH, MATLAB and docker engine
4. Utilized MATLAB, SAS and SPSS in statistical analysis to extract inference and actionable insights
5. Maintained and managed cloud-based server including updating, installing and troubleshooting software
6. Prepared 3+ detailed progress reports to present research findings to internal and cross-functional stakeholders
7. Co-organized monthly seminars on neuroimaging techniques (Neuroimaging Research Group meetings)

Profiles

Skills

- Human Subject Research
- Clinical Research/trial
- Literature Review
- Data Analysis/Predictive Modelling
- Network analysis: NetworkX, MATLAB func
- Qualitative research: Nvivo/Surveys
- Gap Analysis/ Evaluation
- Data collection/Quality control/Visualisation
- Statistics: SPSS, MATLAB, PALM, SAS
- Programing: MATLAB/Python/R/BASH
- Machine learning: MATLAB, Python
- Signal Processing/Time series analysis
- Neuroimaging analysis: fMRI/dMRI/sMRI
- BI tools: MS Power BI, SQL
- MS Office: Word/Excel/PowerPoint/Outlook
- Web tools: Git/HTML/CSS/Jekyll
- Adobe Photoshop/Illustrator/Lightroom
- Team management
- Project Management
- Supervision/Mentoring
- Teaching/Tutoring

Education

PhD in Psychology 2018-2023
The University of Auckland
Auckland, NZ

ME in Information Technology 2014-2016
Azad University
Garmsar, Iran

BE in Information Technology 2010-2014
University of Mazandaran
Babolsar, Iran

Neuroimaging Scientist

Doctoral Researcher, The University of Auckland, (07/2018 – 12/2022, Full-time)

Goal: Applying data science and neuroimage methodologies to study brain's behavior in the human participant research

1. Designed and completed 4+ projects based on human-derived data and managed a multidisciplinary team of 5 scientists
2. Cross-functional collaborator able to build quantitative analysis plans using Python, MATLAB, BASH, and Git as evidenced by analyzing data of 4 projects in 3 teams, including 1 cross-functional collaborations
3. Able to exceed expectations with expertise in identifying patterns and biomarkers in human behavior and complex dataset resulting in 3 well-received cross-departmental presentations on complex network analyses and insights
4. Experience in platform processes and workflows with experience in multivariate statistical techniques using MATLAB, SPSS and Python, as evidenced by the creation of 15+ data-to-value scripts
5. Organized 20+ monthly meeting on projects progression and prepared detailed reports to the internal and external stakeholders
6. Published 2 peer-reviewed articles in top-tier journals in neuroscience
7. Participated in 7+ advanced research workshops and courses, honing skills in data science and neuroimaging
8. Collaborated with international research labs in New York, resulting in 2 joint publications
9. Volunteered in two student led research groups as committee member to organise seminars, workshops and events in neuroscience
10. Mentored and co-supervised 1 master student in their projects, leading to completion of the thesis
11. Instructed and tutored a psychology course for 90+ undergraduate student with a 97% success rate
12. Accumulated 100+ citations, reflecting significant impact and recognition in human study

Projects

Clinical trial of preterm neonates (MR DIAMOND study)

Liggins Institute, Feb 2023 - Sep 2023

Cohort study of preterm neonates (MOPED study)

Liggins Institute, Feb 2023 - Sep 2023

Brain structural connectome study of children with APD

The University of Auckland, Aug 2021 - Feb2023

Functional connectome study of children with APD

The University of Auckland, Aug 2019 - July 2022

Effect of sleep deprivation on individual's pain threshold study

Depart of Exercise Sciences, the University of Auckland, May 2022 - Sep 2022

Functional network study of MCI people

The University of Auckland, July 2018 - Apr 2021

Intelligence correlation to brain structural changes in children with ADHD

ICBS Institute, Tehran, Iran. Dec 2016 - Jan 2017

Publications

1. https://doi.org/10.1093/cercor/bhad075
2. https://doi.org/10.1016/j.nicl.2022.103139
3. http://dx.doi.org/10.32598/bcn.2021.2244.1
4. https://doi.org/10.1016/j.neuron.2021.10.015
5. https://doi.org/10.1016/j.neuron.2019.12.023

Awards

Eisdell Moore Centre mobility grant
2k NZD (Nov 2022)

Travel award from Child Mind Institute
1.2k USD (Sep 2019)

Faculty of Science full tuition award
36k NZD (2018-2022)

Ranking 1st among all enrolled master students
(2014-2016)

Oral Presentations

School of Psychology Talk series Nov 2023
(Auckland, NZ)

OHBM conference July 2023
(Montreal, Canada)

School of Psychology Talk series June 2021
(Auckland, NZ)

BRNZ conference April 2021
(Queenstown, NZ)

In-House symposium Feb 2020
(Auckland, NZ)

Certificates

Ngā Paerewa Te Tiriti
Ministry of Health New Zealand
Issued Nov 2023
ID NZS8134: 2021

CPR/AED/First Aid
Triple One Care
Issued Nov 2023, Expires Nov 2025
ID CERT00717

Good Clinical Practice
The National Institute on Drug Abuse (NIDA)
Issued Mar 2023, Expires Mar 2026
ID HHSN27201201000024C

Power BI: Dashboards for Beginners
LinkedIn
Issued Sep 2023
Skills: Microsoft Power BI