Ashkan Alvand (Ph.D.)

Professional Summary

I am a neuroscience researcher specialized in network theory with more than seven years of experience in producing high-quality research. I have an extensive skill set in research all driven by a great passion for problem-solving. These skills are particularly well-suited for roles such as research analyst, data scientist, or UX researcher positions. I am independent, confident, well-organized, and responsible, with the ability to convey complex information effectively to a wide range of audiences.

Work Experience

Liggins Institute, the University of Auckland – Research Associate
Auckland, NZ. 02/2023 – 09/2023

- Worked in a multidisciplinary team on a clinical trial
- Investigated neurodevelopmental changes in neonates using MRI data
- Sorted data into well-organized formats and performed data clerking
- Maintained Unix servers and prepared them for neuroimaging data analyses
- Troubleshot existing data processing scripts and developed new pipelines
- Validated incoming data to check information accuracy and data quality while independently locating and correcting concerns
- Analyzed data and interpreted patterns and trends of MRI data using MATLAB tools, Python packages and shell on Unix machines
- Utilized statistical packages in MATLAB to analyze data and create visualizations
- Co-organized monthly seminars on neuroimaging techniques

The University of Auckland – Doctoral Researcher
Auckland, NZ. 07/2018 – 12/2022

- Completed Ph.D. project investigating functional and structural organization in children diagnosed with auditory processing disorder
- Developed research proposals, identified research objectives, wrote research ethics and created research plans
- Performed in-depth literature review
- Developed state-of-the-art data collection strategies, performed and monitored data quality
- Requested and acquired equipment necessary for projects
- Recruited more than 70 pediatric participants for MRI scan
- Performed data clerking
- Configured Unix machine, troubleshot and resolved equipment and data processing issues for the study
- Developed new data analysis pipelines using MATLAB, Python and Bash
- Conducted data analyses: Managed and analyzed datasets of over 500 GB, leveraging AFNI, FSL, Bash and MATLAB for insights
- Utilized statistical packages in MATLAB and SPSS to analyze data and interpreted patterns and trends
- Interpreted data analysis results to draw inferences and conclusions
- Create visualizations in MATLAB, Python and Photoshop for presentations and publications

Profiles

🌐 https://ashkan-alvand.com/

in https://www.linkedin.com/in/ashkan-alvand/

Technical Skills

- Quantitative/Qualitative Research
- Data Analysis/Manipulation
- Data Modeling
- Data Visualization/Quality Control
- Data Analytics
- Data collection/Warehousing
- Statistical Modeling
- Study Design
- Network theory
- Neuroscience
- Neuroimaging: fMRI/dMRI/sMRI
- Algorithms
- Programing: MATLAB/Python/R/Bash/
- Web: git/HTML/CSS/Jekyll
- SPSS
- Machine learning
- Docker products
- Adobe Photoshop
- MS Office: Word/Excel/PowerPoint
- OS: Windows/Macintosh/Linux

Interpersonal Skills

- Data storytelling
- Problem Solving
- Critical/Strategic Thinking
- Technical/Scientific Writing
- Organizational skills
- Teaching
- Teamwork
- Active listening
- Attention to details
- Presentation skill
- Team management

Awards

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

- Wrote detailed reports to present research findings to team members
- Presented findings at an international conferences
- Published 2 peer-reviewed articles in top-tier journals in neuroscience and clinical neuroimaging
- Attended 7 advanced research workshops and courses, honing skills in neuroimaging research
- Collaborated with renowned research labs globally, culminating in 2 joint publications
- Accumulated over 100 citations, reflecting significant impact and recognition in human neuroimaging
- Guided 1 graduate student in their projects, leading to completion of the these

Research Assistant
School of Psychology. 12/2022-02/2023

Research Assistant
Department of Exercise Sciences. 05/2022-09/2022

Graduate Teaching Assistant
School of Psychology. 03/2021- 07/2022

Research Assistant
School of Psychology. 07/2018-12/2021

ICBS Institute, Shahid Beheshti University – Research Associate
Tehran, Iran. 04/2016 - 04/2018

- Managed and Maintained the Unix server
- Performed data analysis, statistical analysis and data visualizations
- Published 1 peer-reviewed article in neuroscience

Publications

1. **Ashkan Alvand** (2023), Graph theory analysis of functional and structural connectome: Links to Auditory Processing Disorder. *Ph.D. Thesis* - University of Auckland.
2. **Ashkan Alvand**, Abin Kuruvilla-Mathew, Reece P. Roberts, Mangor Pedersen, Ian J. Kirk, & Suzanne C. Purdy (2022). Altered structural connectome of children with Auditory Processing Disorder: A diffusion MRI study. *Cerebral Cortex.* https://doi.org/10.1093/cercor/bhad075
3. **Ashkan Alvand**, Abin Kuruvilla-Mathew, Ian J. Kirk, Reece P. Roberts, Mangor Pedersen, & Suzanne C. Purdy (2022). Altered brain network topology in children with Auditory Processing Disorder: a resting-state multi-echo fMRI study. *Neuroimage: Clinical*. https://doi.org/10.1016/j.nicl.2022.103139
4. Farnaz Faridi, **Ashkan Alvand**, Reza Khosrowabadi (2022). Brain Structural Correlates of Intelligence in Attention Deficit Hyperactivity Disorder (ADHD) Individuals. *Basic & Clinical Neuroscience.* http://dx.doi.org/10.32598/bcn.2021.2244.1
5. Milham, M., Petkov, C. I., Margulies, D. S., Schroeder, ..., **Ashkan Alvand**,… & Messinger, A. (2022). Towards Next Generation Primate Neuroscience: A Collaboration-based Strategic Plan for Integrative Neuroimaging**.** *Neuron***.** https://www.sciencedirect.com/science/article/pii/S0896627321007832
6. Milham, M., Petkov, C. I., Margulies, D. S., Schroeder, …, **Ashkan Alvand**, ... & Messinger, A. (2020). Accelerating the evolution of nonhuman primate neuroimaging. *Neuron*. 10.1016/j.neuron.2019.12.023

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 students in Master of IT in Azad University (2016)

Education

University of Auckland   2018-2023
Auckland, NZ
Ph.D. in Psychology
Major: Network Neuroscience

Azad University   2014-2016
Garmsar, Iran
Master of Engineering in IT
Major: Computer Networks

University of Mazandaran   2010-2014
Babolsar, Iran
Bachelor of Engineering in IT

Oral presentation

OHBM conference (July 2023)

School of Psychology Talk series (June 2021)

BRNZ conference (April 2021)

In-House symposium (Feb 2020)

Languages

English
Persian