Curriculum Vitae

PERSONAL INFORMATION

Usman Ghani

Department of Health Sciences, Auckland University of Teachnology (AUT), New Zealand.

+62 21 08902791

usmanghani31@gmail.com

Date of birth August 9, 1990.

APPLYING FOR

Related Vacancies.

WORK EXPERIENCE

March 2020-January 2021

Research Associate
College of Chiropractic New Zealand
EMG signal processing using MATLAB.
Chiropractic Adjustment related studies

August 2017-January 2020

Research Assistant
Auckland University of Technology (AUT), New Zealand
Electroencephalography, signal acquisition and processing using EEGLAB.
Poster Designing and participant recruitment.
Virtual reality-based rehabilitation.
Motion sensitivity study setup

January-December 2014

Paid Internship
Pakistan Telecommunication Company Limited (PTCL), Wah Cantt, Pakistan
Manage complaints and new customers using CRM and BNCC.
Submitting daily and monthly excel reports.

March-April 2012

Internship
Pakistan Ordnance Factories (POF), Wah Cantt Pakistan
Managing information system, databases and inventory

PUBLICATIONS

Journal Publications

1. **Ghani, U**., Signal, N., Niazi, I.K., Taylor, D., 2021.Source localization of event-related potentials in a cognitive workload evaluation study (In progress)
2. **Ghani, U**., Signal, N., Niazi, I.K., Taylor, D., 2021. Efficacy of a single-task ERP measure to evaluate cognitive workload during a novel exergame. (Submitted “frontiers in Neuroscience”)
3. **Ghani, U**., Signal, N., Niazi, I.K., Taylor, D., 2020. A novel approach to validate the efficacy of single task ERP paradigms to measure cognitive workload. International Journal of Psychophysiology 158, 9-15.
4. **Ghani, U.,** Signal, N., Niazi, I.K., Taylor, D., 2020. ERP based measures of cognitive workload: A review. Neuroscience and biobehavioural reviews 118, 18-26.
5. **Ghani, U.**, Wasim, M., Khan, U. S., Mubasher Saleem, M., Hassan, A., Rashid, N., Kashif, A. (2018). Efficient FIR Filter Implementations for Multichannel BCIs Using Xilinx System Generator. BioMed Research International, 2018, 9. doi:10.1155/2018/9861350

Conference Publications

1. **Ghani, U.,** Signal, N., & Taylor, D. (2019). EEG correlates of task difficulty: Development of an objective measure of cognitive workload. In K. Hillman (Ed.), Proceedings of the 37th International Australasian Winter Conference on Brain Research, 2019 (pp. 62). Queenstown. Retrieved from https://www.otago.ac.nz/awcbr/otago717176.pdf [PDF]
2. Hassan, **U. Ghani**, F. Riaz, S. Rehman, M. Jochumsen, D. Taylor, I. Niazi, “Using a Portable Device

Curriculum Vitae

for Online Single-Trial MRCP Detection and Classification" in Intelligent Data Engineering and Automated Learning – IDEAL'15:16th International conference 14-16 October, Wroclaw, Poland, Proceedings. Springer, pp. 527-534. Lecture Notes in Computer Science, no. 9375, DOI:10.1007/978-3-319-24834-9_61

EDUCATION

August 2017- Current

PhD in Health Sciences (Neuroscience)
Auckland University of Technology (AUT), New Zealand
Thesis title: Evaluation of cognitive workload using electroencephalography (EEG) and Event related potentials (ERPs).

September 2013-March 2016

MS in Computer Engineering
College of Electrical and Mechanical Engineering, CEME NUST, Pakistan
Thesis title: Using a portable device for detection and classification of MRCPs in EEG signals.
Supervisor: Dr. Ali Hassan
CGPA: 3.55/4 (85%)
Distinctions:
Higher Education Commission (HEC) scholarship Award (2013-15)

October 2010-December 2014

BS Electrical (Computer) Engineering
COMSATS Institute of Information and Technology (CIIT), Abbottabad, Pakistan
Thesis title: Real time implementation of a noise separator on DSK-C6713 using MATLAB and C coding.
CGPA: 3.69/4.0 (86.67%)
Distinctions:
Information and communications technologies (ICT) scholarship (2019-2013)

SKILLS

Mother tongue(s): Urdu

Other language(s): English, Punjabi

UNDERSTANDING	SPEAKING	WRITING
9.0	8.0	9.0

Lab-related skills: Brain signal acquisition using emotive headset, Nuamps, and TMSi system. Analysing and processing signals in MATLAB and EEGlab. Worked on Raspberry pi and Arduino. Knows both hardware and software description languages (C, C++, MATLAB, R, Python, VHDL and Verilog). Worked on Digital Signal Processing (DSP) kit DSKC6713. Proficient with Modalism (Digital Circuit Design), Xilinx, Proteus, Pspice, Multisim, Electronic Work Bench, Wireshark (Computer Network Simulation Tool).

Computer skills: MS Office Package (Word, Excel, PowerPoint, outlook, and Visio), Latex, Windows OS, Linux/Ubuntu, Adobe photoshop, and some hardware troubleshooting.

Projects: EEG signal processing for stroke patients, Using EEG as biometric. Using raspberry pi for image processing with its on board camera.

Curriculum Vitae

REFERENCES

Can be furbished on requirement