Ravikiran Parameshwara

Curriculum Vitae

Education

Feb 2021 - Present	**Doctor of Philosophy (Ph.D.)**, *Faculty of SciTech, University of Canberra, ACT, Australia*
	Supervisors: Dr. Ibrahim Radwan, Prof. Roland Goecke, Dr. Ramanathan Subramanian
	My research, broadly in the domain of Artificial Intelligence, aims at inferring emotion intensity in a continuous range from face images using Deep Learning techniques. The project requires programming, analytical and mathematical skills.
Jun 2015 - May 2017	**Master of Science in Mathematics**, *Christ University, Bengaluru, India*, CGPA – 3.29/4.
Jun 2012 - May 2015	**Bachelor of Science in Physics, Chemistry and Mathematics**, *St. Joseph's College (Autonomous), Bengaluru, India*, CGPA – 3.93/5.00, Percentage – 75.13%.

Work Experience

Aug 2022 - Present	**Digital Research Trainer**, *Intersect Australia Ltd., Sydney, Australia*
	(Casual) I provide hands-on training to researchers (PhD candidates, Government employees) on Machine Learning, Python, R, and other research tools.
Aug 2022 - Present	**Sessional Tutor**, *University of Canberra, Australia*
	(Casual) Teaching Assistant for the graduate course "Programming for Data Science" for Semester-2, 2022, and Semester-2 2023.
Aug 2018 - Aug 2019	**Research Assistant**, *Dept. of Computer Science and Engineering, Indian Institute of Technology (IIT) Ropar, India*
	Worked as a Research Assistant at Social Computing and Collective Intelligence (SCCI) Lab on various projects like building a toolkit for knowledge building research, developing a MOOC Wiki interface to enhance learning among the students, etc.
July 2018 - Oct 2018	**Content Developer**, *Indian Institute of Technology (IIT) Ropar, India*

Worked towards developing video content for thirty hours for the **NPTEL** course Discrete Mathematics (around 6k students enrolling every semester). The project involved novel ways of teaching the concepts through animations using Camtasia and Doceri software.

Jun 2017 - Dec 2017 **Research Intern**, *Indian Institute of Technology (IIT) Ropar, India*

Worked as an intern on navigability on the logical deduction graph of Euclid's *Elements*, and mentored undergraduate students in the project.

Apr 2016 - May 2016 **Summer Intern**, *National Institute of Technology, Karnataka (NITK), India*

Worked as an intern under Dr. K. P. Vishwanath on basic numerical methods such as Bisection method and Newton method. Numerical differentiation, numerical integration and one-dimensional finite element method were studied theoretically and using Scilab programs.

Research Papers

ACM ICVGIP 2023 **Examining the Influence of Personality and Multimodal Behavior on Hireability Impressions**, *Harshit Malik, Hersh Dhillon, Ravikiran Parameshwara, Ramanathan Subramanian, Roland Goecke*, In Proceedings of the Fourteenth Indian Conference on Computer Vision, Graphics, and Image Processing (ICVGIP) 2023.

ACM MM 2023 **Efficient Labelling of Affective Video Datasets via Few-Shot & Multi-Task Contrastive Learning**, *Ravikiran Parameshwara, Ibrahim Radwan, Akshay Asthana, Iman Abbasnejad, Ramanathan Subramanian, Roland Goecke*, Submitted to ACM Multimedia (MM) 2023. (paper) (code) [CORE A* conference]

IEEE ACII 2023 **A Weakly Supervised Approach to Emotion-change Prediction and Improved Mood Inference**, *Soujanya Narayana, Ibrahim Radwan, Ravikiran Parameshwara, Iman Abbasnejad, Akshay Asthana, Ramanathan Subramanian, Roland Goecke*, Accepted in 2023 International Conference on Affective Computing and Intelligent Interaction (ACII). (paper)

IEEE FG 2023 **Examining Subject-Dependent and Subject-Independent Human Affect Inference from Limited Video Data**, *Ravikiran Parameshwara, Ibrahim Radwan, Ramanathan Subramanian, Roland Goecke*, In 2023 IEEE 17th International Conference on Automatic Face and Gesture Recognition (FG) (pp. 1-6), IEEE. (paper) (presentation)

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IEEE FG 2023	**Determining Affect Intensity on a Continuous Scale**, *Ravikiran Parameshwara*, Doctoral Consortium at 2023 IEEE 17th International Conference on Automatic Face and Gesture Recognition (FG). IEEE. (website)
Intelligent Computing Journal	**Exploring EEG-based Affective Analysis & Detection of Parkinson's Disease**, *Ravikiran Parameshwara, Soujanya Narayana, Murugappan Murugappan, Ramanathan Subramanian, Ibrahim Radwan, Roland Goecke*, Submitted to Intelligent Computing, a Science Partner Journal (in review). (code)

Research Activities

Masters Thesis (May 2017)

Title	**Linear and non-linear analysis of thermal instability in a nanofluid**
Supervisor	Prof. S. Pranesh, Christ University, Bengaluru, India
Description	Linear and non-linear analysis of magneto-convection in a nanofluid layer has been done using thermal non-equilibrium model. Also the effect of internal heat generation on the onset of Rayleigh-Bénard convection has been studied.

Mini Project (Mar 2016)

Title	**Effect of Non-uniform temperature gradient on Rayleigh Bénard convection in a micropolar fluid**
Supervisor	Prof. S. Pranesh, Christ University, Bengaluru, India
Description	The qualitative effect of a non-uniform temperature gradient on the linear stability analysis of the Rayleigh Bénard convection in an Eringen's micropolar fluid is studied numerically. The temperature profiles studied are linear, parabolic and step function.

Mini Internship (Oct 2015)

Title	**Fibonacci numbers and graph theory**
Supervisor	Fr. Dr. Joseph Varghese, Associate Professor, Christ University, Bengaluru, India
Description	The graphs of order F_n and size F_{n+1} are constructed for different values of n, where F_n represents the nth Fibonacci number. Parameters like dual of a graph, adjacency matrix, line graph, eccentricity, diameter, girth, independence, radius, connectivity etc. are studied.

Term paper for Bachelor's degree (Dec 2014–Mar 2015)

Title	**Three Body problem**

Supervisor	Sheela Thomas, St. Joseph's College, Bengaluru, India
Description	A report has been submitted on Poincaré's planar circular restricted three body problem, Hill's region and asymptotic and bi-asymptotic solutions.

Academic Activities

Volunteering

Sep 2023	**Affective Computing and Intelligent Interaction (ACII)**, a premiere conference in affective computing research at MIT Media Lab, Boston, USA.
Nov 2022	**ACM International Conference on Multimodal Interaction (ICMI)**, a premiere conference in multimodal research at Bengaluru, India.
April 2022	**Climate Change Adaptation in the Australian Capital Territory (ACT) Symposium**, Provided technical support for the symposium which involved senior researchers, policy makers and ACT ministers.
Nov 2013	**Mathematics for Planet Earth-2013**, *Vishweshwariah Industrial and Technological Museum, Bengaluru*, Took part as a volunteer (along with attending seminars) in math exhibition held by Tata Institute of Fundamental Research - Centre for Applicable Mathematics, Bangalore.

Conferences Attended

Oct 2023	**ACM International Conference on Multimedia (MM)**, a premiere conference in multimedia research, held at Ottawa, Canada.
Sep 2023	**Affective Computing and Intelligent Interaction (ACII)**, a premiere conference in affective computing research, held at MIT Media Lab, Boston, USA.
Jan 2023	**IEEE International Conference on Automatic Face and Gesture Recognition (FG)**, a premiere conference in face and gesture recognition research, held at Hawaii, US (attended virtually).
Nov 2022	**ACM International Conference on Multimodal Interaction (ICMI)**, a premiere conference in multimodal research, held at Bengaluru, India.
Mar 2017	**International conference on Science, Engineering and Management**, a two-day conference at Kuriakose Elias College, Mannanam, Kerala, India.
Mar 2017	**National Conference on emerging Trends in Graph Theory**, a two-day conference at Christ University, Bengaluru, India.

Apr 2016	**National Conference on Emerging trends in Fluid Mechanics**, a two-day conference at Christ University, Bengaluru, India.

Professional Societies

- Institute of Electrical and Electronics Engineers (IEEE) - Student Member
- Association of Computing Machinery (ACM) - Student Member
- Association for the Advancement in Affective Computing (AAAC) - Student Member

Review Services

2021 - Present	○ IEEE Transactions on Affective Computing ○ IEEE Transactions on Multimedia ○ ACM Multimedia (MM) 2023 ○ IEEE Affective Computing and Intelligent Interactions (ACII) 2023 ○ ACM International Conference on Multimodal Interaction (ICMI) 2023

Academic Visits

Jun 2023	Seeing Machines Ltd., ACT, Australia
Aug 2023	Optus AI Centre, Curtin University, WA, Australia
Nov 2023	University of Pittsburgh, PA, USA
Nov 2023	Carnegie Mellon University, PA, USA
Nov 2023	Meta Reality Labs, PA, USA

Awards

Jan 2023	Selected to present my doctoral research at **Doctoral Consortium at IEEE FG 2023**.
Feb 2021	Australian Research Council Discovery Project **PhD Scholarship** for a period of three years (2021 - 2024).
Dec 2016	**Best Poster Award**, for the Poster entitled *"Mathematics and Technology for Strategizing Enterprise"* at 9th KSTA annual conference organized by Karnataka Science and Technology Academy.

Tech Skills

Advanced	**Pytorch (contributor)**, Python, Matlab, Mathematica, Keras-TensorFlow
Intermediate	Origin, Scilab
Basic	R, C++