

Aashish Bhandari

aashishbhandari.com



EDUCATION

- 2024- **RMIT UNIVERSITY** **MELBOURNE, AUSTRALIA**
Doctor of Philosophy (Ph.D.) in Computer Science
Research on using multimodal learning for personalized medicine
- 2019-2023 **DELHI TECHNOLOGICAL UNIVERSITY** **NEW DELHI, INDIA**
B.Tech. in Computer Engineering
Artificial Intelligence, Machine Learning, Data Structures, Algorithm Design & Analysis
- CGPA: 8.95 out of 10
Research component (Thesis): *Leveraging multimodal information in speech data for the non-invasive detection of Alzheimer's disease, Grade: A+*

EXPERIENCE

- RMIT UNIVERSITY** **MELBOURNE, AUSTRALIA**
Casual Sessional: Computing Technologies *Feb 2024 – Present*
- Teaching Foundations of Artificial Intelligence for STEM (COSC2960)

- UNIVERSITY OF TECHNOLOGY SYDNEY (UTS)** **SYDNEY, AUSTRALIA & REMOTE**
Visiting Scholar *Feb 2022 – Dec 2023*
- Honorary appointment as a visiting scholar at the University of Technology Sydney (UTS)
 - Designed, developed, and tested conversational agent prototypes that aim to integrate conversational user interfaces into everyday items around us at home to improve positive practices and habits.

- Research Assistant & Software Developer* *May 2022 – Aug 2022*
- Conducting research work with the Faculty of Engineering and IT, University of Technology Sydney (UTS) on conversational agents, proactive experiences and self-reflection. Developing multiple agents for the project.
 - Designing fine-tuned diffusion and large language models (LLMs) for multiple domains.

- DELHI TECHNOLOGICAL UNIVERSITY (DTU)** **NEW DELHI, INDIA**
Undergraduate Researcher *Jan 2022 - Present*
- Conducting research work with Dr. Prashant Giridhar Shambharkar, Assistant Professor, Department of Computer Science and Engineering, Delhi Technological (DTU), on using artificial intelligence for healthcare applications. Outcome: 2 conference papers
 - Reviewer for IEEE International Joint Conference on Neural Network (IJCNN)

PUBLICATIONS

- **Bhandari, A.***, Shah, S. B.*, Thapa, S.*, Naseem, U., & Nasim, M. (2023). CrisisHateMM: Multimodal Analysis of Directed and Undirected Hate Speech in Text-Embedded Images from Russia-Ukraine Conflict. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)* (pp. 1993-2002) (A*) ([paper link](#))
[full paper, No.1 publication in Engineering & Computer Science according to Google Scholar Metrics]
- Shah, S. B., **Bhandari, A.**, & Shambharkar, P. G. (2023). Leveraging multimodal information in speech data for the non-invasive detection of Alzheimer's disease. In *2023 14th International Conference on Computing Communication and Networking Technologies (ICCCNT)* (accepted) **[full paper]**

- Bérubé, C., Pe Benito, C.R., Ibarcena, N., Pistolese, O., Li P., Sawad, A.B., **Bhandari, A.**, Hemsley, B., Berkovsky, S., Stettler, C., Fleisch, E., Kowatsch, T., & Kocaballi, A.B. (2023) Proactive Voice Assistants: A Systematic Review and Conceptual Model. In: *Computers mdpi* (submitted) [full paper]
- Smith, J., **Bhandari, A.**, Yuksel, B., & Kocaballi, B. (2022). An Embodied Conversational Agent to Minimize the Effects of Social Isolation During Hospitalization. In *ACIS 2022 Proceedings*. 87. <https://aisel.aisnet.org/acis2022/87> [full paper]
- Shah, S. B., **Bhandari, A.**, & Shambharkar, P. G. (2022, November). Deep Learning Methods For COVID-19 Mitigation: Applications, Challenges and Future Implications. In 2022 *International Conference on Computing, Communication, and Intelligent Systems (ICCCIS)* (pp. 775-781). IEEE. [10.1109/ICCCIS56430.2022.10037702](https://doi.org/10.1109/ICCCIS56430.2022.10037702) [full paper]
- **Bhandari, A.**, Shah, S. B., & Shambharkar, P. G. (2022, October). The Confluence of AI and Blockchain in Tackling the COVID-19 Pandemic. In 2022 *13th International Conference on Computing Communication and Networking Technologies (ICCCNT)* (pp. 1-6). IEEE. [10.1109/ICCCNT54827.2022.9984223](https://doi.org/10.1109/ICCCNT54827.2022.9984223) [full paper]

PROJECTS ([GitHub](#))

- [Shopify Real-time Data Syncing System](#): Extracts data from the REST API of Shopify to integrate it into a more conventional database like PostgreSQL, making it easier and more convenient for analyzing and reporting real-time data.
- *Patient-to-health Care Providers-* [Remote Video Chat Interface](#): The web application connects patients to any available health care providers who have access to the platform, allowing health professionals to directly communicate with the patients.
- [Face Mask Detector](#): Developed a model using Convolutional Neural Network (CNN) architecture, with the layers built through TensorFlow. It detects if a person is wearing a mask or not through a live video stream.
- [Stock Market Predictor](#): A project forecasting stock market indices using a Long Short- Term Memory (LSTM) method.

HONORS AND AWARDS

- Honorary appointment as a visiting scholar at the University of Technology Sydney (UTS)
- Runner Up DH CRC sponsored Best Paper Award for the Digital Health Track at the Australasian Conference on Information Systems 2022
- Karate Black Belt at the age of 12, a recognized diploma (Black Belt) received from Nepal Shotokan Karate Association (S.K.I.F) (18/09/2013), silver medalist in individual kumite at 2011 and 2012 Indo-Nepal Karate Championship, and gold, silver and bronze medalist in individual kumite, kata and team kumite at South Asian Shotokan Karate Championship 2013.

TECHNICAL SKILLS

- Programming Languages: Python, C/C++, HTML, CSS, JavaScript
- Tools & Technologies: RESTful APIs, JSON, Git/GitHub
- Packages: Scikit-Learn, Keras, TensorFlow, NumPy, Pandas, Matplotlib, Seaborn, Jupyter Notebook
- Industry Knowledge: ML Algorithms, Deep Learning, Model Development, Data Visualization, Shopify Development

LANGUAGE SKILLS

- Native Nepali Speaker, fully proficient English & Hindi speaker