RENUKA SHARMA

renuka.sharma@data61.csiro.au| renuka.researcher.ai@gmail.com|
www.linkedin.com/in/renuka-sharma-phd-84545a4a/ **|** Brisbane, QLD, Australia

SUMMARY

- 6+ years of experience in Computer Vision, Machine Learning, and AI within Computer Science and Engineering, spanning academia, industry, and industrial research organisations.
- Worked with diverse datasets and collaborated with domain experts from the medical, industrial, and agricultural sectors, across teams located throughout Australia.

EXPERIENCE

Postdoctoral Research Scientist
Commonwealth Scientific and Industrial Research Organisation (CSIRO)

08/2022 – present
Brisbane, Aus

- Curated ML dataset from complex and unstructured raw video data in collaboration with subject matter experts to address real-world behaviour recognition challenges.
- Developed POCs for a behaviour recognition system by applying computer vision algorithms to the curated dataset.
- Conducted exploratory analysis on multi-modal behaviour recognition systems using audio and visual modalities, further extending the approach to more challenging sensing modalities.
- Generated synthetic sensing data for wearable sensors using an Gen-AI pipeline integrating LLMs (prompting), data preprocessing, simulation, and domain adaptation modules.
- Collaborated with cross-functional teams across ML, agriculture, and medical fields to deliver actionable insights.
- Presented and documented research and implementation insights to both technical and non-technical audiences.
- Mentored small and medium-sized enterprises (SMEs) and students on AI-driven research projects.
- Mentored and supervised undergraduate students in project deliverables and research activities.

Researcher
Woodside FutureLab, Monash University

07/2018 – 07/2022
Melbourne, Aus

- Developed a corrosion detection system using data engineering and AI algorithms on real-world image dataset.
- Engaged in industrial collaboration as part of my PhD thesis, partnering with two universities.

Joint-PhD research scholar
Indian Institute of Technology (IIT) Bombay and Monash University

07/2018 – 07/2022
India and Aus

- Curated a medical dataset using ML techniques and domain knowledge.
- Led 4 end-to-end deep learning based research projects over 3 years during the pandemic, resulting in 4 first-author scientific papers while collaborating across universities and industry
- Conducted research on anomaly detection in images, working with toy, synthetic, medical, industrial, and real-world datasets, including data engineering preprocesses.
- Designed and implemented ML architectures using Python, PyTorch, Pandas, and HPC for

RENUKA SHARMA

renuka.sharma@data61.csiro.au| renuka.researcher.ai@gmail.com|
www.linkedin.com/in/renuka-sharma-phd-84545a4a/ **|** Brisbane, QLD, Australia

large-scale data processing.
- Completed the first year of coursework at IIT Bombay, along with a literature review and feasibility studies for my PhD thesis.
- Mentored undergraduate students throughout research projects
- Demonstrated persistence and resilience while completing doctoral research during the pandemic.

Teaching Assistant   07/2016 – 06/2018
Indian Institute of Technology (IIT), Roorkee   **Roorkee, India**

- Led a team of ten teaching assistants for the Data Structures course, managing tutorials and assessments for 200+ undergraduate students.
- Served as a teaching assistant for a faculty development program, mentored participants during lab sessions, facilitating hands-on learning of database concepts and providing guidance on practical applications.

Systems Engineer   07/2014 – 07/2016
Infosys Technologies Limited   **India**

- Worked on Identity Access Management (IAM) projects, implementing security measures for a US-based automotive client.
- Managed end-to-end project life-cycle, including development, testing, deployment, and handover to the client.

EDUCATION

PhD, Computer Vision | IIT Bombay, India and Monash University, Australia **|** 2023
Master of Technology, Computer Science and Engineering | IIT Roorkee, India **|** 2018

SKILLS

Programming: Python, PyTorch, Pandas, Scikit-learn, TensorFlow, Java, C, C++, SQL, MATLAB
Software and Tools: Computer Vision Annotation Tool (CVAT), VGG Image Annotator (VIA), Linux, Windows, Flask, Gradio

LINK TO PROFILE

• LinkedIN: www.linkedin.com/in/renuka-sharma-phd-84545a4a/
• Google Scholar (Publications): scholar.google.com.au/citations?user=6QPqFwMAAAAJ&hl=en&oi=ao
• GitHub: https://github.com/RenukaSharma
• CSIRO bio page: people.csiro.au/s/r/renuka-sharma

REFERENCES

Sara Khalifa | Associate Professor| QUT, Brisbane| E: sara.khalifa@qut.edu.au

Abdelwahed Khamis| Research Scientist| CSIRO, Brisbane| E: abdellwahed.khamis@data61.csiro.au