# Khondaker Tasrif Noor

146 Bellerine Street, Geelong, VIC, 3220, Australia

+61 4 5073 5474 | ✉ *ktnoor.ai@gmail.com, k.noor@research.deakin.edu.au,* | 🔗 *linkedin.com/in/tasrif-khondaker/* | ⓘ *0000-0002-4259-9539*

## PROFILE                                                          👤 *ktnoor.github.io*

A highly competent researcher with a strong focus on deep learning, specifically experienced in neural network architecture design, algorithm implementation, and advanced AI model and system testing. I have strong communication and project planning skills within collaborative team environments. My PhD research focuses on innovative neural network methodologies, and I am pursuing a career to leverage my research, technical, and design expertise within artificial intelligence systems to unlock commercial value.

## EDUCATION

**Deakin University — Doctor of Philosophy**                                              *Current*

Pursuing a PhD in Information Technology with a research focus on developing deep learning models for image classification. Recipient of the prestigious Deakin University Postgraduate Research Scholarship (DUPR). Published multiple research papers in top-tier conferences and journals. Expected thesis submission by the end of March 2025.

**Macquarie University — Master of Engineering in Electronics Engineering**                *November 2019*

Achieved Vice-Chancellor´s International Scholarship and completed a Master of Engineering degree with a specialisation in Electronics Engineering. Gained in-depth knowledge in the areas of analogue and digital electronics. Adapted technical and practical skills for electronic systems and circuit design by completing electronic projects as a part of coursework.

## EMPLOYMENT EXPERIENCE

**Sessional Academic — Deakin University, Waurn Ponds, Australia**                          *Sep 2022 – Current*

I am currently working as a sessional academic staff member, contributing to the Deep Learning (SIT319, SIT744) and Artificial and Computational Intelligence (SIT215) units. My responsibilities include:
- Designing, demonstrating, and explaining deep learning models using Keras and TensorFlow.
- Addressing student queries to enhance their understanding and engagement.
- Providing academic consultations and contributing to the development of course materials.

**Firmware Engineer — EMVision Medical Devices Ltd.**                                      *Mar 2021 – Sep 2021*

EMVision is an innovative medical device company developing portable electromagnetic microwave imaging solutions. My responsibilities included:
- Inspecting, developing, and validating device testing plans.
- Designing a GUI for device testing and automating the test bench analysis process.
- Documenting product specifications, installation procedures, and testing protocols.
- Researching emerging technologies and optimising processes to improve testing workflows and foster innovation.

**Testing Engineer — RF Technology**                                                       *Feb 2020 – Dec 2020*

RF Technology is a leading Australian manufacturer of wireless communication products. My responsibilities included:
- Programming, testing, and ensuring the quality of digital radios, power amplifiers, and power supplies.
- Documenting, implementing, and verifying testing processes for all products.
- Enhancing product quality by refining hardware designs and advancing RF module expertise.
- Guiding the production team and ensuring timely product status updates.

## RESEARCH AND PROJECTS

- **Publications:** I have original research published to top-tier conferences and journals. Key publications include:
  - ▸ *H-CapsNet: A Capsule Network for Hierarchical Image Classification*, Pattern Recognition (2024).
  - ▸ *A Consistency-Aware Deep Capsule Network for Image HMC*, Neurocomputing (2024).
  - ▸ *A Bottom-Up Capsule Network for Hierarchical Image Classification*, DICTA (2023).
  - ▸ *A Capsule Network for Hierarchical Multi-label Image Classification*, S+SSPR (2022).

- **Key Projects:** I have delivered notable research and industry-oriented projects, most notably:
  - ▸ Designing Deep Neural Architectures tailored for hierarchical multi-label classification.
  - ▸ Developing a GUI-Based Automation System for testing medical devices.
  - ▸ Smart Sun Exposure: Enabling wireless UV sensing for personalised sun exposure monitoring.
  - ▸ Designing and Implementing a Reconfigurable Antenna for wireless communication.

## SKILLS AND EXPERTISE

### SOFTWARE AND TECHNICAL SKILLS

- **Documentation and Office Tools**: Proficient with Microsoft Office (Word, Excel, PowerPoint, Access, Project) and LaTeX for professional documentation and record keeping.
- **Machine and Deep Learning**:
  - Skilled in classical ML (scikit-learn) for regression, classification, clustering, and dimensionality reduction.
  - Proficient in deep learning frameworks (Keras, TensorFlow, PyTorch) for building and training neural networks.
  - Strong theoretical grounding in optimization algorithms (SGD, Adam, AdamW, RMSprop, etc.), probability/statistics, backpropagation, and advanced loss functions.
- **Data Analysis and Visualization**: Experienced in data wrangling and feature engineering with Pandas, NumPy, and visualisation using Matplotlib or Seaborn.
- **GPU Computing and Hardware Acceleration**: Working knowledge of NVIDIA CUDA (or similar) for faster model training and inference.
- **Version Control and Collaboration**: Proficient in Git (GitHub, GitLab) and CI/CD workflows for collaborative software development.
- **Programming Languages**: Working knowledge of Java, C++, Python, and MATLAB for algorithm development, data analysis, and numerical computing.
- **Embedded Systems and Microcontrollers/Processors**: Programmed and prototyped solutions using Arduino and Raspberry Pi, integrating sensors, actuators, and peripheral modules.
- **Hardware Prototyping**:
  - Designed schematics and PCBs using Altium (including BOM, pick-and-place files, 3D models).
  - Oversaw PCB fabrication, component soldering/assembly, and conducted functional testing.
- **Digital Electronics and FPGA Design**:
  - Implemented digital logic with Xilinx ISE, Electric VLSI, and LTspice.
  - Prototyped and validated designs on FPGA boards for functionality and timing.
- **Electronics Simulation, RF and Antenna Design**: Modeled electronic systems with AWR, Proteus, PSpice, and PSim; designed/analysed antennas using CST Studio.

### PROFESSIONAL AND INTERPERSONAL SKILLS

- **Teamwork and Collaboration**: Collaborated effectively in academic and workplace settings, balancing individual tasks and group dynamics to achieve project objectives.
- **Leadership**: Led multiple academic projects, guiding team members and ensuring successful deliverables for high-profile events.
- **Public Speaking and Presentation Skills**: Delivered numerous presentations in coursework and competitions, including research findings at international conferences and workshops.
- **Adaptability and Quick Learning**: Quickly acquired new technical skills and processes in various roles, adapting to new environments and challenges with ease.
- **Problem Solving and Critical Thinking**: Skilled in diagnosing and resolving complex technical issues, ensuring optimal performance and reliability.

### RESEARCH AND INDUSTRY KNOWLEDGE

- **Research Skills**: Proficient in advanced methodologies, experimental design, data analysis, and literature reviews.
- **Electronics Test Equipment**: Skilled in operating and analysing data from RF spectrum analysers, vector signal analyzers, high-speed oscilloscopes, and RF test sets.
- **RF Implementation and Regulatory Compliance**: Hands-on experience in designing, testing, and analysing RF modules, including regression testing and certification procedures to meet regional regulatory standards.
- **Project Management**: Proficient in planning, coordination, and execution of academic and professional projects, ensuring timely delivery and quality outcomes.

## ADDITIONAL INFORMATION

- Successfully participated and completed "*Empowering Innovative Leaders Program, (2024)*" at Deakin University.
- **Certifications:**
  - Battery Management Systems (2024).
  - Professional Engineer (Engineers Australia, 2023).
  - TensorFlow Developer (DeepLearning.AI, 2022).
  - IT Automation with Python (Google, 2022).
  - AI Engineering (IBM, 2021).
  - Digital Systems (UAB, 2021)
  - Specialisation in Programming the IOT (UCI, 2020).
  - PCB Designing (Udemy, 2020).
- **Peer Reviewer:** Reviewed papers for conferences such as KSEM, AICCSA, ECAI, PAKDD and journals such as Pattern Recognition, Information fusion, Neurocomputing, Neural computing and applications, and MethodsX.

## REFERENCES

**Wei Luo**
Associate Professor,
School of Information Technology,
Deakin University, Australia.
📱 +61 3 924 46509
✉ *wei.luo@deakin.edu.au*

**Mohamed Reda Bouadjenek**
Senior Lecturer,
School of Information Technology,
Deakin University, Australia
📱 +61 3 522 78380
✉ *reda.bouadjenek@deakin.edu.au*