Jhevish Ramphul

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Education

University of Bath — Bath, UK
MSc Computer Science (2:1) — *Oct. 2023 – Oct. 2024*
- Modules: Software Engineering, SQL Database, Reinforcement Learning, Artificial Intelligence

University of Mauritius — Réduit, Mauritius
BEng (Hons) Electrical and Electronic Engineering (2:1) — *Sep. 2018 – Nov. 2022*
- Accredited by the Institution of Engineering and Technology (IET)
- Relevant Modules: Project Management, Programming Techniques 1 & 2, Engineering Mathematics, Probability & Statistics, Microprocessors & Microcontrollers

Experience

Requirements Analysis & Agile Delivery for SEN Game Development — Oct. 2023 – Dec. 2023
University of Bath — *Bath, UK*
- Led end-to-end requirements analysis for a Unity-based serious game for SEN children, including stakeholder engagement, structured feedback cycles, and creation of detailed acceptance criteria.
- Applied **Agile methodologies**, managing tasks and prioritisation on Trello, facilitating Daily Standups, and contributing to **Sprint Planning** to maintain project alignment and workflow efficiency.
- Oversaw quality assurance using structured testing and validation checklists, ensuring the prototype met all functional and stakeholder expectations.

Lunar Lander AI Control System: RL Algorithm Comparison Project — Mar. 2024 – May 2024
University of Bath — *Bath, UK*
- Led a team comparing four RL algorithms (REINFORCE, DQN, Double DQN, PPO) on the Lunar Lander environment, designing the training pipeline including state-space setup, reward shaping, and reproducible resets.
- Benchmarked algorithm performance using convergence trends, cumulative rewards, and variance across multiple runs to evaluate robustness and learning efficiency.
- Investigated challenges in value-based vs. policy-gradient methods, analysing issues such as sparse rewards, instability, and high-dimensional inputs; explored mitigation techniques including target networks, experience replay, and clipped objectives.

Research & Projects

IoT Smart Meter | LoRa-WAN, Wi-Fi, PCB, PIC32/STM32/Atmega2560
- Led a team to design and implement a real-time energy logging system with wireless transmission.

Airflight Database System | Python, Tkinter, SQLite3
- Developed a GUI application for flight data entry, storage, and retrieval using a custom interface.

Sudoku AI Solver | Python, X-Algorithm
- Implemented an AI-based solver using the X-algorithm to compute complete Sudoku solutions.

Long-Range Patient Monitoring | LoRa RYLR896
- Built a long-range health monitoring system enabling microcontroller communication; published a paper in JTEC.

Dynamic Gesture Recognition | Raspberry Pi, LSTM, AI
- Fine-tuned a static hand-gesture model and integrated dynamic gesture recognition via LSTM to classify motion.
- Deployed system on Raspberry Pi to control electrical appliance intensity via actuators and relays.

Technical Skills

Engineering Tools: MATLAB, Simulink, LabVIEW, Multisim, Revit, Fusion 360, Dialux, KiCad
Machine Learning: Scikit-learn, OpenCV, Keras, Matplotlib, TensorFlow
Cloud / CAD: Adobe, CAD, AutoCAD
Productivity: MS Word, Excel, PowerPoint, QuickBooks, Visio, Outlook, LaTeX
Programming: Python, C/C++