LAWRENCE KEVIN

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Portfolio: klken26.github.io/kevin-portfolio/

EDUCATION

Singapore University of Technology and Design **Sep 20 to Present**

- Bachelor of Engineering (Computer Science and Design), Honours
- Cybersecurity Specialisation Track
- Minor in Artificial Intelligence, Minor in Digital Humanities
- Date of graduate: May 2024

University of Maryland (UMD) **Maryland, USA**

- Global Exchange Programme (GEXP) **Jun 23 to Aug 23**
- Bachelor of Engineering – BE, Computer Science

WORK EXPERIENCES

DSO National Laboratories **Jun 23 to Sep 23**
Computer Vision Engineer Intern

- Researched in the field of image generation, where usage and understanding of NeRFs and stable diffusion models are required. Assimilation of such models were also studied, such as state-of-the-art SSD-NeRFs that utilised both diffusion models and NeRFs to reduce Learned Perceptual Image Patch Similarity (LPIPs) of generated 3D images by ~35%
- Presented directly to the management team in weekly meetings and actively participated in inter-team discussions.
- Tested and trained advanced video editing methods such as neural network image congealing, where 20% of improvements in training time were made.

DSO National Laboratories **Aug 22 to Dec 22**
Machine Learning R&D Engineer Intern

- Researched on cutting-edge RL model paradigms such as Fully Observable Markov Decision Process (FOMDP) (Q-Learning, SARSA), POMDPs (Deep Recurrent Q- Learning Process) and other models (Multiagent MDPs and Dynamic State MDPs) for the purpose of overcoming jamming in the context of battlefield communications.
- Accomplished faster and better training accuracy, up to 30% more accurate compared to conventional statistical modeling methods using FOMDP (Deep Q-Learning) models.

ACADEMIC PROJECTS

University of Maryland **Apr 23 to May 23**
PyTorrent – BitTorrent Client Recreation

- Peer-to-peer networking application created to download .torrent files.
- Led a team of 4, Implemented 3+ features such as leeching, multi-threading, hash checksum, via HTTP requests for safe downloading. Developed in C and Python.

Singapore University of Technology and Design **Jul 24 to Apr 24**
Capstone: VMMRoom

- Collaborated with a team of 5 to deploy feature-packed ML-powered real-time license plate detection system, with 3+ features such as inferencing on Jetson Orin Nano, front-end to view alerts and real-time response to license plate mismatches.
- System pipeline uses system design strategies such as multi-threading and low-level socket programming for fast transmission.
- Created using ReactJS, MongoDB, ElectronJS, Python, SeaweedFS, Minicom, Bash Scripting.

Singapore University of Technology and Design **Mar 22 to Apr 22**
TeacherSpace

- A Teacher Privacy cum Scheduler Application intended to provide uninterrupted off-work hours.
- Collaborated in a team of 5 and Implemented 3+ features such as queue NoSQL Firebase database to handle student bookings with in-built calendar, log-in system and in-built messaging system using Java.

ADDITIONAL INFORMATION

- Technical Skills: JavaScript, Python, Tensorflow & Keras, Pytorch, HTML & CSS, MongoDB, jQuery, Java, ReactJS, C, Assembly, Unix-Shell Usage.
- Interests: Operating Systems, Task Management, Project Management, Optimisation, APIs, Software Design.