Wallace Peck

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EDUCATION

National University of Singapore | Singapore

- **Bachelor of Computing in Computer Science (Honours) | Specialisation**: Artificial Intelligence **Aug 2023 - Dec 2027**
- **Relevant Courses**: Data Structures & Algorithms **(Java)**, Software Engineering **(OO, Java)**, Introduction to AI & ML **(AI, ML)**

Ngee Ann Polytechnic | Singapore

- **Diploma in Engineering Science | GPA:** 3.86/4.0 **Apr 2018 - May 2021**
- **Relevant Courses:** Data Structures & Algorithms **(C++)**, Emerging Mechatronic Technologies **(CV, ML)**

TECHNICAL SKILLS

- **Programming Languages:** Java, Python, C++, C#, JavaScript, HTML
- **Software:** Intellij IDEA, Git, Godot, Blender, Fusion 360, text-generation-webui (Oobabooga)
- **APIs & Other Tech Stacks:** PyTorch, TensorFlow, CuDNN, OpenCV, Matlab, ROS

PROFESSIONAL EXPERIENCE

Software Developer & Technician | RSAF | Singapore **Feb 2023 - May 2023**

- Led a project exploring use of **Oculus VR** headset and simulation rig to aid driver training
- Built custom 3D digital assets replicating real vehicles for use in commercial-of-the-shelf VR software
- Coordinated testing and feedback sessions with drivers to improve realism and transferability
- Demonstrated VR training software to RSAF Logistics HQ
- **Awards**: Best Airman Award

Vehicle Technician | RSAF | Singapore **Dec 2021 - Jan 2023**

- Excelled in the use of manufacturer diagnostics equipment to identify complex vehicle faults within minutes, boosting workshop productivity
- Developed an automated script using VBA to forecast preventive maintenance milestones and track lapses
- Collated existing records into Microsoft Power BI to determine common faults and associated repair times across 5 distinct vehicle models
- **Awards**: Best Technician Award

PROJECTS

Trackwork | Personal Game Modding Project **Dec 2023 – Present**

- Accumulated over **500 000 downloads** as of Jan 2025
- Design conceptualized over multiple months to ensure a stable and immersive gameplay experience for target users
- Extensive use of libraries to reduce boilerplate and development time by **over 90%** compared to its peers
- Organised a long prototyping phase involving continuous feedback from dozens of users to support iterative **AGILE** development and feature polishing
- Collaborated on **Github** to add localisation support for **7 major languages** and porting to different versions

Health Screening 2024 | Self-Sourced Project | Public Health Service (PHS) **Jul 2024 - Aug 2024**

- Impacted over **1000** volunteers & participants who underwent a health screening by PHS
- Collaborated with a team of 4 developers & streamlined its development using **AGILE** & **Git**
- Overhauled PDF printing workflow to be **extensible** by modularising code and applying DRY
- Contributed to improvements in application **UI/UX** and integrated with asynchronous data retrieval operations

Fall Detector | IOT Development Project | Ngee Ann Poly **Dec 2020**

- Devised fall-detection home monitoring system using then **state-of-the-art model** CLIP, achieving almost **100% precision** and recall on video with real scenarios, a significant improvement over naive feature-based computer vision techniques
- Integrated with IoT network and tested live using a single laptop as host machine

Human and Objects Detection for Robotics Social Navigation | Final Year Project | Ngee Ann Poly **Apr 2020 - Apr 2021**

- Programmed a small, wheeled robot base with vision sensors such as the SR305 and ZED 2 combined with Nvidia Jetson Nano to create a real-time obstacle avoidance and **social navigation** agent
- Designed and marshalled a multi-language multi-process network using **ROS** to handle sensor-fusion, logical processing and actuator commands