Randy Chong Jun Er

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EDUCATION

Singapore Institute of Technology   **Aug 2023 – Current**
Bachelor of Engineering with Honours in Robotics System

Nanyang Polytechnic   **Apr 2018 – Apr 2021**
Diploma in Business Information Systems with a Diploma Plus in Robotic Process Automation (RPA).

WORK EXPERIENCE

Catalyst Student Coach   **Dec 2024 - Current**
Singapore Institute of Technology
- Achieved Platinum Certification to coach students with respect and patience
- Coached and trained students to achieve certification for power tool usage
- Guided more than 100+ students of all areas in operating power tools, laser cutters and saws in a safe manner
- Applied Critical Thinking to help students in improving their project outcomes

Data Analyst Intern   **Mar 2021 – Aug 2021**
KILDE Pte Ltd
- Wrote and analysed PostgreSQL dataset using SQL to uncover key business insights to aid decision making
- Built interactive Metabase dashboard for customer acquisition and segmentation to provide stakeholders with key insights to derive strategy plans
- Set up Segment visual tagger on the landing page to track user events to aid with the creation of targeted and effective Facebook advertisement campaigns

PROJECT EXPERIENCES

System Design for Innovative Solution Development
Tackled an open-ended project by applying systems engineering principles, conducting domain specific analysis, engaging stakeholders and producing evidence-based documentation to architect and justify an innovative solution. The final solution was selected as a top three project and nominated to represent my course in the James Dyson competition.

Autonomous Navigation in a Constrained Arena
Applied systems engineering processes to solve a real-world challenge including domain research, stakeholder analysis and needs. Developed a physical obstacle arena and programmed a LIMO robot to navigate it autonomously by applying system-level thinking to manage integration challenges and operational constraints.

Robotics and Autonomous Systems Development
- Built a Zigbee-controlled robot using Spin language, integrated ToF and ultrasonic sensors for obstacle and fall avoidance and designed a 3D-printed mount for a pick-and-place tennis ball mechanism
- Developed a ROS Gazebo maze simulator and implemented SLAM using the ROS Navigation Stack to enable autonomous maze-solving behaviour
- Collaborated with an industry partner to identify operational bottlenecks, define a problem statement and lead prototype development while applying project management principles to ensure timely delivery

User-Centered Design & Design Thinking
Applied design thinking methodology to identify user-focused solutions by conducting interviews, developing personas and creating customer journey storyboards. Translated insights into actionable problem statements and designed solutions aligned with user needs.

TECHNICAL SKILLS

Programming Language: Python, MySQL, JavaScript, HTML, CSS, C#, AngularJS, C, C++, ROS, Linux, Shell Scripting, Spin
Tools: System Engineering, Tableau, UiPath, Bizagi, Figma, Canva, LeadPages, Segment, Google Analytics, SolidWorks, ProjectLibre, Arduino, Raspberry Pi
Cloud Platforms: Azure, DigitalOcean, OVHCloud